

**Bloomberg  
Businessweek**

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**WARREN  
BUFFETT**

**FEMINIST  
ICON?**

The inside  
story of  
how a Buffett  
foundation  
is changing the  
reproductive  
lives of millions  
of women p46





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"I always  
KNEW I WANTED  
TO BE



in fruit"

p52

**"We need  
robots to test  
the robots"**

p39

**"All I can say is that we  
had an anonymous donor.  
I wish I could be more  
helpful, because I know  
it's a fascinating story"**

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**"Let's put it  
this way. There's  
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How the cover gets made

1

"Cover's on the IUD gaining popularity as a form of contraception, thanks in part to a Buffett foundation."

"As in Warren Buffett?"

"Yes."

"Is there anything Warren Buffett can't do? This means we can finally put him on the cover. It's a business magazine rite of passage. Legitimacy at last."

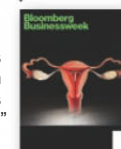


2

"Well, he doesn't actually run the foundation, so maybe we should try an IUD on the cover."



3 "Looks strange at that size."



4 "This does not help with the strangeness problem."



5 "OK, let's go back to Warren, but emphasize the idea that he's a feminist icon."





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# A TECH HOTBED IN THE HEARTLAND

**MOVE OVER, SAN FRANCISCO. KANSAS CITY, MISSOURI IS EMERGING AS A WORLD LEADER IN INNOVATION AND ENTREPRENEURSHIP**

When Google chose Kansas City as the first city to receive high-speed broadband internet and cable television as part of its Google Fiber initiative in 2012, it brought national attention to what many in the community already knew: “Silicon Prairie” is a great place to start and grow a business.

As a hub for many large businesses such as Hallmark, H&R Block and American Century Investments, Kansas City has long distinguished itself as a launchpad for entrepreneurs. But the modern economy is about more than greeting cards and tax preparation. Named by the Global Entrepreneurship Research Network as one of the top five emerging entrepreneurial ecosystems in the country, Kansas City is building on its reputation by cultivating a series of programs aimed at helping innovators find success.

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S3

“Kansas City has a very strong entrepreneurial history,” says Kevin McGinnis, President of Pinsight Media+, a subsidiary of Sprint that utilizes mobile technology to connect companies and consumers. “You’ve got a strong underpinning of technology companies and the amazing talent that’s here, and the high quality of life and standard of living really allow startups to have a longer runway, and help us attract the STEM talent we need.”

The Sprint Accelerator powered by Techstars is just one example. “Think of it as a community center for entrepreneurs that’s run by a large corporation,” says McGinnis of the immersive 90-day program, which for the past two years has invited 10 mobile technology startups to Kansas City for in-depth mentorship within a state-of-the-art building in the city’s burgeoning downtown area.

The Accelerator not only offers the startups—such as FitBark, an activity tracker for dogs, and Jolt, a real-time tracker for detecting sports-related concussions—three months of guidance in a collaborative environment, it also offers to house the companies beyond those initial 90 days with the goal of further growing Kansas City’s local job market. “We provide not only the mentorship of the Techstars network, but also Sprint executives,

local entrepreneurial mentors and other resources to help them accelerate their companies,” adds McGinnis.

“We’ve got more than enough assets for people who are interested to take a look at, and to understand how those assets are inextricably woven into a fabric of innovation, entrepreneurship and small-business startups,” says Kansas City Mayor Sly James, who recently touted the city’s TechHire program—which helps retrain unemployed workers for highly skilled careers in growing technologies, while introducing them to companies in need of workers—alongside President Obama. “We’re not just thinking outside the box, we realize there is no box—and we’re going to continue to look at things in a very open way and see what we can do with it. It’s the ultimate ‘what if.’ And answering what-ifs is a great experience and experiment.”

By leveraging such ambitious programs and using Kansas City as an incubator for big ideas, local companies are moving to the next level—and elevating the city in the process. Sprint is currently soliciting applications for the Sprint Accelerator’s 2016 class, and the company has also developed the Direct 2 You program, which enables trained experts to deliver and set up new mobile devices to customers wherever they might be, as well as provide on-the-spot

tutorials. The program is currently rolling out nationwide, and Sprint aims to have experts in over 30 major cities by year’s end.

“To be able to bring those innovations here first is something that we’re very proud of,” says McGinnis. “We’re glad to be a part of what’s happening here, whether we’re piloting programs in our own backyard or continuing to contribute to the entrepreneurial ecosystem with the Sprint Accelerator.”

## A NEW GENERATION OF ENTREPRENEURS

Helping foster this new climate of entrepreneurship, Kansas City’s Ewing Marion Kauffman Foundation focuses attention on education to not only help existing entrepreneurs learn and grow, but to inspire a new generation of innovators and leaders.

Founded by the late Ewing Marion Kauffman, who started what became the billion-dollar Marion Laboratories pharmaceutical company in the basement of his home, the foundation has launched a number of initiatives aimed at entrepreneurs, including the popular 1 Million Cups program that offers education and mentorship to early-stage startups at weekly community gatherings, as well as Kauffman FastTrac courses and Founders School, which offers founder education.

“Mr. Kauffman believed that the opportunity for people to start and grow their own company is really critical—not only as a path to economic independence, but also for economic growth in our nation,” says Wendy Torrance, Director of Entrepreneurship. “In the work that we do, we have local roots, national impact and

**“WE’RE NOT JUST THINKING OUTSIDE THE BOX, WE REALIZE THERE IS NO BOX.”**



global reach. The foundation brings to life the vision that Mr. Kauffman had for the ways in which we could support and encourage entrepreneurship.”

According to a September 2013 paper, “Path-Dependent Startup Hubs—Comparing Metropolitan Performance: High-Tech and ICT Startup Density,” released by the Kauffman Foundation, Kansas City ranked third in “high-tech startup growth among large metropolitan areas between 1990 and 2010.” The strength of the city’s programs—such as the Sprint Accelerator; the Economic Development Corporation (EDC), which works cooperatively with the city to retain and grow existing businesses and promote workforce development; KCnext, whose mission is to make Kansas City a leading destination for technology companies and professionals; and the Kansas City Startup Village, an entrepreneur-led community geared toward supporting startups—is “an indication of the underlying strength of the region and its base of talent on which those programs can build.”

“We believe that entrepreneurship is critical to the growth and vibrancy of Kansas City, and one of our goals is to help develop talent in Kansas City—human capital that can contribute to the creation of new companies,” says Torrance. “The other piece of education is providing entrepreneurs the skills and knowledge to start companies. We’ve done that in our own initiatives, and there are other support organizations in Kansas City that are helping to foster that, as well.” One of these, a program called Pipeline, identifies companies with the potential for high growth and engages its founders in an intensive year-long education program, while the University of Missouri-Kansas City’s Henry W. Bloch School of Management has provided a foundation in business education for six decades.

Additionally, the Kauffman Foundation just announced a new \$2 million initiative to award grants to nonprofit organizations around the country that successfully support entrepreneurs. “The initiative is intended to identify and develop promising practices that

can help organizations provide the conditions and education for entrepreneurs to be successful,” Torrance explains.

Ideally, this “entrepreneurial spawning” will not only continue to grow the job economy in Kansas City, but will also have both national and global impact when these entrepreneurs, nurtured in the Silicon Prairie, send their products and services out into the global marketplace.

“We’re looking for ways to bring more people under the tent of entrepreneurship, innovation and startups so we’re able to provide opportunities to as many different people as possible,” says Mayor James, who touts KC’s Smart+Connected Communities program—a partnership with Cisco that will develop an easily accessible mobile platform for the city—organized around the KC Streetcar line that is currently under construction. “Google Fiber was the fuse that started everything burning and brought a lot of attention to the area,” James adds, “and then we simply capitalized on that attention to show people who we are and who we always have been.” — *Jill Sieracki*

## MIND YOUR BUSINESS

The Kauffman Foundation equips entrepreneurs with the knowledge, skills, tools, and networks they need to grow the enterprises that create jobs and wealth for America. From our home in Kansas City we reach across the country providing **Kauffman FastTrac®** courses to help start and grow your business, weekly **1 Million Cups** gatherings of entrepreneurs in more than 70 locations, and resources available online anytime at **Kauffman Founders School** to help you mind your business.

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# Opening Remarks

The stork was busy in America last year. The Centers for Disease Control and Prevention reported 3,985,924 births in 2014, a 1 percent increase from 2013 and the first rise since 2007. At an average of 1.9 births per woman, the country's fertility rate remains too low to keep the population stable. This isn't just a problem in the U.S.; around the developed world, families aren't having as many kids, and that's a potential threat. The prospects of a rapidly aging and shrinking population are ominous for pension and health-care costs.

If other demographic forces don't come into play, women need to give birth to 2.1 children on average to keep population constant. This number is called the replacement fertility rate. If women average one girl, one boy, and an occasional extra baby, that accounts for the risk that kids will die before they've had kids themselves. Across the wealthiest members of the Organisation for Economic Co-operation and Development (OECD), the fertility rate has dropped from 2.98 children per woman in 1960 to 1.78 in 1990 and 1.66 today, well below the replacement level. If nothing changes, there will be a considerable shift toward smaller, much older populations throughout the

industrialized world. Retirees don't work, but they do consume—drawing pensions and requiring health care. That creates a real challenge for how to support them.

The good news is that there's a solution to the population problem; it's one of those other demographic forces I hinted at above. There are lots of people around the world who want to come to the countries that have the lowest birthrates. Many are already potty trained and literate, and some even have advanced degrees. Letting more of them in is one of the few effective tools we have to raise the birthrate.

For reasons including misplaced fear about a lack of jobs, concern about social cohesion, and rank xenophobia, most countries choose not to encourage immigration. Donald Trump expressed that xenophobia in June when he announced he was running for president, saying Mexican immigrants to the U.S. were "bringing drugs. They're bringing crime. They're rapists." (He did add that he assumes "some...are good people.") Less obnoxiously, Theresa May, Britain's home secretary, who heads immigration policy in the U.K., suggested to an audience at a British think tank in 2012 that she's keen to restrict foreigners, because "how can people build relationships with their neighbors if they can't even speak the same language?" Immigrants, May added, deny natives housing, hospital beds, and places in school.

Instead of liberalizing immigration, governments have tried a range of approaches to encourage more people to become parents. In 2007, Russia designated Sept. 12 Family Contact Day, followed up nine months later by Give Birth to a Patriot on Russia Day.

Mothers

who timed things right and gave birth on schedule won prizes such as an SUV, presumably with a preinstalled rear-facing baby seat. Singapore introduced National Night in 2012, rolling out a pro-procreation jingle: "I'm a patriotic husband; you're my patriotic wife. Let's do our civic duty and manufacture life."

Singapore has tried cash rewards as well. Beginning in 1987, the country introduced a series of "baby bonuses"—a little more than \$1,500 for a second kid; twice that for a third—along with generous tax credits. The policies did lead to a brief spike in baby making, but not enough to reverse the long-term trend. Other countries have also found payouts for procreation don't have much effect in the long run.

Given the scale of the decision potential parents are being asked to make, a small bribe apparently doesn't change much. Even if the sticker price were the only cost to be factored in—with years of interrupted sleep, diaper changing, and conflict over untidy bedrooms counting for nothing—it isn't clear many governments could afford the payments that would be required to alter the financial calculus of having a child.

The U.S. Department of Agriculture estimates that it costs \$245,340 to raise a kid to the age of 18. That excludes lost parental income and costs for college. (The average bill for four years at a university is \$96,000.) To make a dent in those numbers would cost a government a lot more than any appears ready to spend. Imagine if the U.S. kicked in 10 percent of the cost of raising a child for the 3.9 million births that occur every year in America: That would be \$97 billion annually, or one-fifth of the federal nondefense discretionary budget.

Rich countries have introduced some policies that do work to raise birthrates, based on the idea that we shouldn't force women to choose between kids and a career. Compared with goofy prizes,

better access to child care really can be an important tool for sustaining birthrates.

Analysis of

## Immigrants To the Rescue

By Charles Kenny

**Donald Trump is wrong: Immigration isn't a problem—it's the solution to a shrinking, aging U.S. population**





government-supported child care in Norway, Italy, and Spain suggests it had a sizable impact on fertility choices. The European Union has set targets for one-third of kids age 3 or younger and 90 percent or more of kids between 3 and school age to have places in day care. Those European countries that were already approaching or surpassing the targets in 2008 have fertility rates of about 1.77 today, slightly higher than the OECD average.

For all of its potential benefits for both parents and their offspring, child care is no panacea for a declining population. Sometimes, increased access doesn't appear to have an impact on fertility at all. In a study of German child care published this year, Alexander Bick of Arizona State University found that better access increased the number of mothers in the workforce and the number working longer hours but had little effect on the number of children born. In France, one of the leading European countries in terms of providing child care, the fertility rate of native-born French women remained only 1.8 in 2005. Spain, another child-care leader, has an overall fertility rate of 1.32 children per woman.

Contrary to the protests of nativists and pandering politicians, immigration can stabilize a population. Although immigrants rapidly adopt the fertility patterns of their new countries, they still tend to produce more children to begin with. Migrant women in France had an average of 3.3 children each in 2005, bumping the country's overall fertility rate up from 1.8 kids per woman to 1.9. According to Pew Research Center data, the foreign-born in the U.S. account for 13 percent of the total population but 23 percent of

the births. Through 2050, immigrants arriving since 2005 and their descendants will account

for four-fifths of U.S. population growth.

Immigration can also help reduce the ratio of retirees to workers. Migrants tend to arrive as young workers rather than babies or pensioners. In the U.S., less than 7 percent of the foreign-born population is younger than 18, compared with more than 25 percent of the native-born. That means a recipient country gets the instant benefit of a larger working-age population without the expense and delay of rearing workers as children.

Some newly arrived workers help provide cheap child-care options for everyone else. Delia Furtado of the University of Connecticut, who looked at U.S. Census data from 1980 to 2000, attributes increased fertility among skilled American women in that period to the growing population of unskilled immigrants willing to provide child care at a low cost.

Trump's alarm about crime and May's concerns about access to services are overblown. If anything, there's less crime in areas with more immigrants in the U.S., according to a 2012 analysis by Marjorie Zatz and Hilary Smith in the *Annual Review of Law*

*and Social Science*. And research in the U.K. suggests that a larger local immigrant population is associated

with reduced waiting time for health services. That may be because so

many immigrants

become a vital part of the health-care workforce.

More immigration is both the cheapest and most effective response to the challenge of a shrinking, aging population. It's the only plausible solution that appears powerful enough to counteract declining birthrates among native populations in industrialized nations. If countries want to avoid shriveling, they'd better put out the welcome mat. **E**



## Preventing Obamacare Fraud

Congress should fund the agencies entrusted to root out false claims



While Obamacare is still a long way from providing insurance to every American who needs it, the program is apparently pretty good at covering people who don't exist. Eleven out of 12 fictitious people obtained coverage, plus federal subsidies to help them pay for it, in a test of the Affordable Care Act's antifraud measures conducted by the U.S. Government Accountability Office. And all 11 were automatically re-enrolled for the following year, some even getting a bigger subsidy.

Given that subsidies for Americans buying health insurance on state and federal exchanges are projected to reach \$100 billion annually by 2025, the potential for fraud the GAO has uncovered is intolerable.

How could it happen? To qualify for subsidized Obamacare coverage, you need to be a citizen or legal immigrant, with income below 400 percent of the federal poverty level. Supposedly, the government verifies each applicant's Social Security number, citizenship status, and other information. Yet when the GAO investigators made their fake applications using bogus or incomplete documents, or no documents at all, they were able to sign up, obtaining about \$30,000 in annual federal subsidies.

The weak link, the GAO concluded, was phone registration. People who call in to sign up don't need supporting documentation. The U.S. Centers for Medicare & Medicaid Services (CMS), which is responsible for the exchanges, is supposed to request that information later, but those requests were often unclear and hard to make sense of. And when the GAO's fictitious applicants didn't provide any documents, they got subsidies anyway.

Some of this might have been expected. Obamacare is an enormous undertaking, requiring government agencies to share data across various networks. Setting up systems to provide insurance—particularly after the debacle of the website's launch—CMS officials made ease of access a priority over detection of fraud.

CMS needs to make a greater effort to determine whether people qualify, even if that means slowing applications. The contractor CMS hired to process documents hasn't been required to try to detect fraud, only to check whether applicants' documents

"have obviously been altered." The Internal Revenue Service should be the backstop against fraud, by checking the tax returns of subsidy recipients to see if they qualify. (All recipients are required to file.) The GAO's fictitious enrollees failed to file returns, and that should have eventually alerted the IRS to the problem. Unfortunately, because of \$1.2 billion in budget cuts since 2010, the IRS is ill-equipped to investigate such irregularities.

A majority-Republican Congress isn't eager either to make Obamacare work better or to give CMS and the IRS the resources they need to root out false claims. In this case, however, lawmakers should make an exception to following party loyalties. Preventing fraud shouldn't be a political issue.

## How to End Partisan Gridlock, India Edition

Modi has to find a way to work with the politicians he trounced last year

India's parliament is well in the middle of its "monsoon" session, but it has yet to conduct any real business, let alone enact the reforms the country badly needs. Neither Prime Minister Narendra Modi nor India can afford the delay. A year after he swept into power, industrial production is sluggish, private and public investment is lackluster, and stock market optimism is waning.

Of the reforms on the table, the most crucial is instituting a nationwide goods-and-services tax (GST). Unfortunately, the opposition Congress Party has seized on a pair of scandals to paralyze the parliament. Legislators are refusing to allow any debate until three members of Modi's Bharatiya Janata Party resign over influence-peddling charges. It's a cynical tactic.

If the GST is to be in place by spring, as planned, legislation must be passed this session. Compromise should be possible: Congress first introduced the GST idea when it was in power in 2006, and several changes it's now demanding represent improvements. By embracing some, Modi might be able to outmaneuver holdouts in his own party.

Modi, however, has to give a little by addressing the scandals. Sushma Swaraj, the external affairs minister who is charged with helping a fugitive tycoon obtain travel documents, has offered to defend herself in parliament. Modi himself shouldn't shy away from questions. The other scandal—involving a yearslong scam to buy access to government jobs and educational institutes in Madhya Pradesh—may not be a matter for debate in parliament. Nonetheless, Modi should make clear that he won't tolerate any interference from BJP figures in the probe. For its part, Congress should meet the prime minister halfway. Voters turned their backs on the party last May because it lacked an appealing vision for moving the country forward. Obstructionism now won't change voters' minds.

To sidestep the gridlock in Delhi, Modi has begun giving India's states responsibility for some of his more controversial reforms, including changes to land-acquisition laws. But the prime minister can't afford to write off parliament. Elected to make bold decisions, Modi must also know when to compromise. **B**

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## U.K.'s Budget Master Plans for More Pain

► Chancellor of the Exchequer George Osborne is the top contender for the prime minister's job

► "It looked like someone staking out his political territory and testing his leadership chances"

When the Conservative Party won an unexpected majority in U.K. elections in May, it didn't just mean George Osborne would get to keep his job as chancellor of the exchequer. It also put the keys to 10 Downing Street within his grasp. "Three years ago, before the recovery, his political career was seen as pretty much over," says Adam Ludlow, a senior consultant at political polling company ComRes in London. "Now that times are good, confidence in him is high."

Since he delivered his July budget, Osborne has become most bookmakers'

favorite for prime minister when David Cameron steps down sometime before May 7, 2020. "This was more than just a budget—it looked like someone staking out his political territory and testing his leadership chances," says Wyn Grant, a professor of politics at the University of Warwick.

Osborne's budget proposed a drastic shrinking of the welfare state and the civil service—£12 billion (\$19 billion) in cuts. They come on top of the reductions he pushed through in his first term as chancellor. Osborne told the House of Commons on July 8 that he was

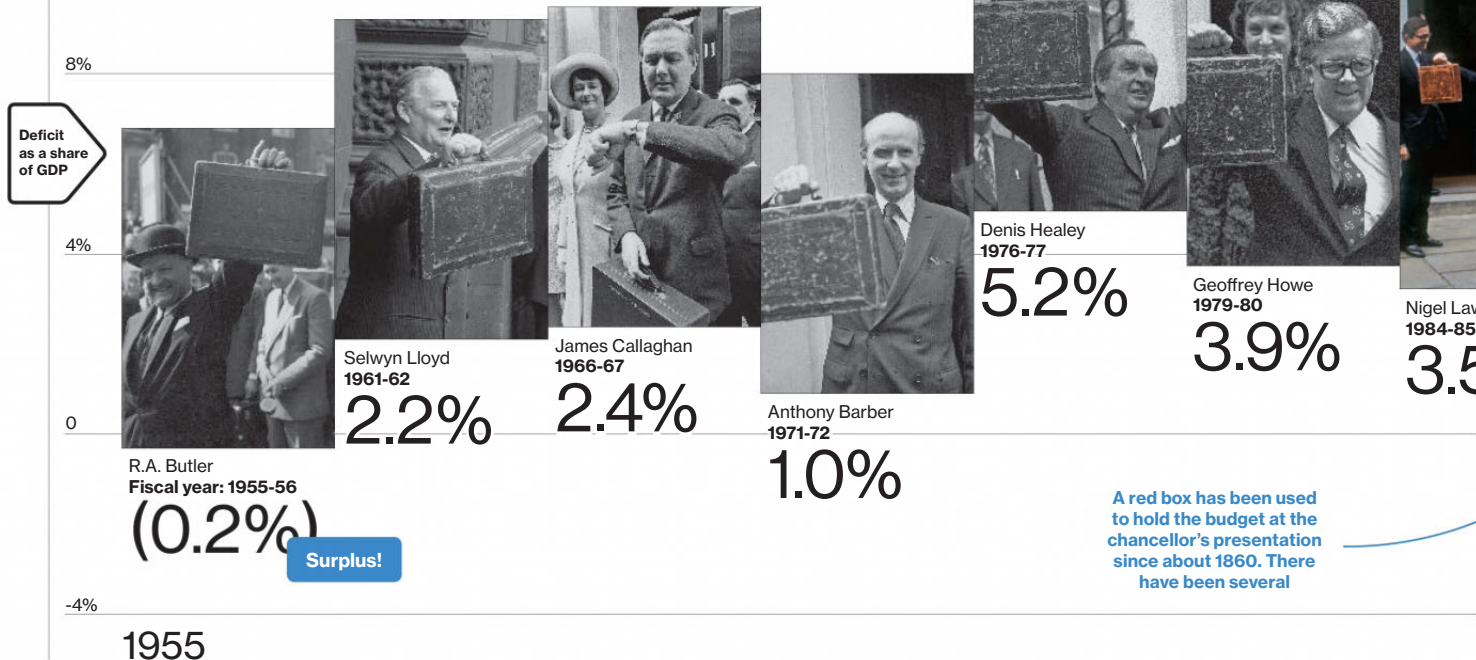
proposing "a budget for working people, a budget that sets out a plan for Britain for the next five years to keep moving us from a low-wage, high-tax, high-welfare economy to the higher-wage, lower-tax, lower-welfare country we intend to create." He wants to increase the minimum wage from £6.50 an hour for workers over 25, to £7.20, starting in April 2016, tax large companies to pay for the training of apprentices, and lower taxes for low earners. Yet the budget takes a bite out of welfare benefits that poor Britons rely on.

It's hard to believe that this is the

FROM LEFT: PA IMAGES (2); MIRROR/PA IMAGES (3); PHOTOSHOT; PA IMAGES; PHOTOSHOT; GETTY IMAGES (3); BLOOMBERG

### A Brief History of British Deficits

Chancellors of the exchequer in postwar Britain present the government's fiscal-year budget in the traditional red box



Younger workers  
could soon see fatter  
paychecks 16

China's SOEs may get  
some tough love 16

Jeb Bush says, "Check  
out my record" in  
Florida. OK, let's 17

Fences, fences  
everywhere 18

same man who was booed by the crowd at the 2012 London Paralympics, at the height of his first austerity program. Many saw it as a disaster for the working class and the handiwork of someone whose father is a wealthy baronet—an aristocrat with no feeling for the needs of ordinary Britons. The news that he couldn't remember the last time he'd eaten a Cornish pasty, a popular meat pie, made him seem comically, dangerously out of touch.

In 2012 the promised Tory economic revival was nowhere in sight. Polls showed the Labour Party gaining, and Cameron and Osborne looked likely to be one-termers. When growth stalled at the end of 2011 and 2012, Osborne turned the spending taps back on. A range of infrastructure projects, put on hold by Osborne in 2010, got rolling and boosted the economy in time for the election. In 2015 the British economy will grow 2.7 percent, according to the International Monetary Fund. That compares with 0.6 percent in 2012, the worst year for the economy under the Tory-led coalition.

Within hours of the Tories' victory on May 8, Cameron awarded Osborne, the party's chief political strategist, the honorific title of first secretary of state, making him de facto deputy prime minister. Within weeks he was standing in for Cameron in the weekly sparring sessions with lawmakers, which the PM describes as the toughest part of his job.

Cameron revealed before the election that he won't stand for a third term. He may resign after the referendum on Britain's membership in the European Union, promised by the end of 2017: No one is really sure. Besides Osborne, potential candidates for Conservative Party leadership include London Mayor Boris Johnson, who was, until Osborne's budget speech, the bookmakers' favorite.

Osborne has been reshaping his personal image. He's lost weight by fasting two days a week. His new haircut became the focal point of an interview with *Channel 4 News*. He's trying to show he understands the needs of working people. During the election campaign last spring, he visited bakers

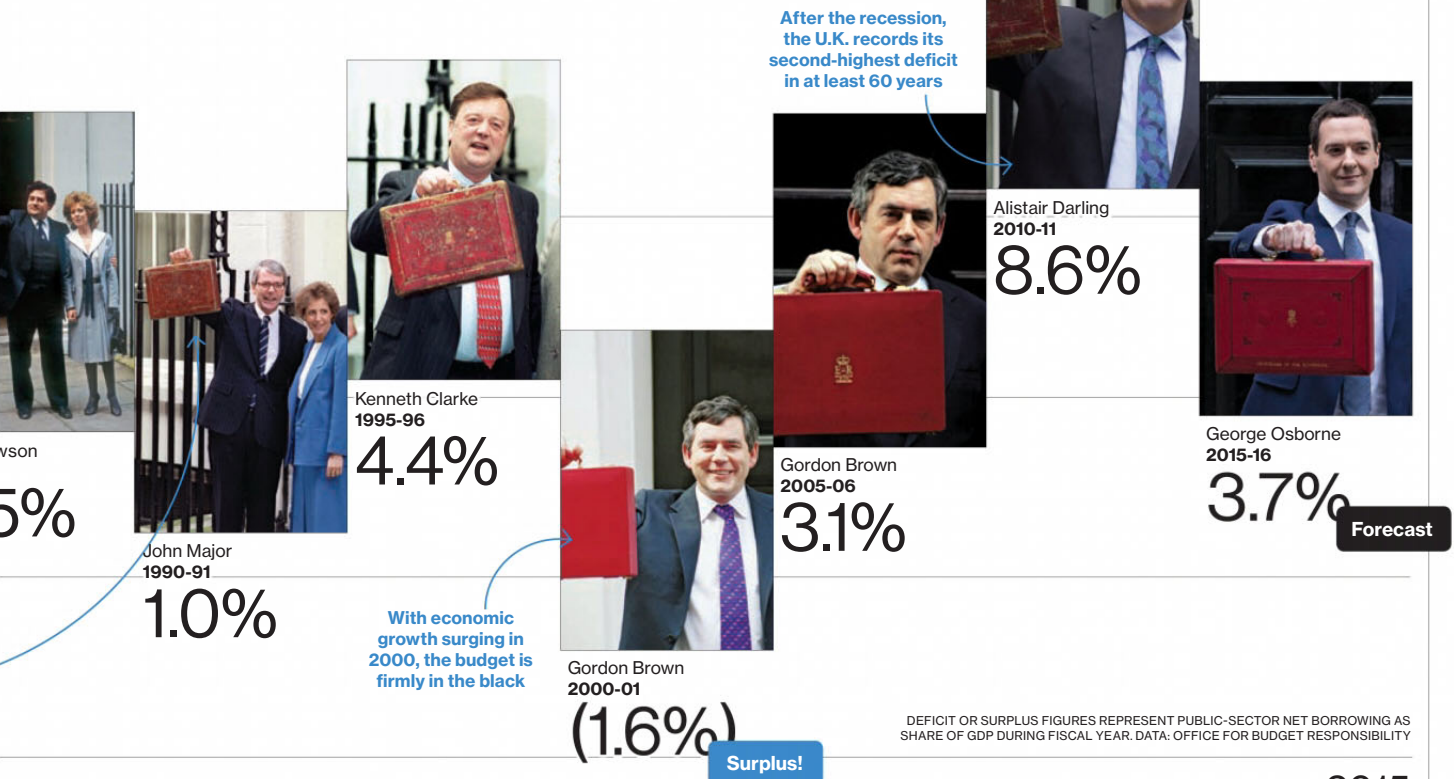
on a night shift, workers on building sites, and assembly lines at factories.

With a Tory majority, Osborne will likely get his budget passed. The proposed cuts in spending will hit working families on lower incomes the hardest. And while he's sought to cushion the blow by pairing lower benefits with the minimum wage hike, some economists say that won't be enough to make up for the loss of tax credits and other benefits such as additional welfare payments for every child in a family. The proposed budget limits those payments to two children. The Institute for Fiscal Studies, an independent research group, estimates the cuts in benefits will leave 13 million families with £260 less a year in their pockets on average.

If this pain delivers jobs, Osborne could be the next prime minister.

"George Osborne has always been particularly close to and particularly loyal to Cameron," says Nigel

Lawson, Margaret Thatcher's chancellor of the





◀ exchequer. “I’m sure he’s Cameron’s preferred successor. But both he and the government are going to be judged first and foremost on the state of the economy.” —*Svenja O’Donnell, with Rob Hutton*

**The bottom line** Osborne has the lead in the race to be Conservative Party chief and possibly the next prime minister of Britain.

## Labor

### Robots Will Take All the Jobs? Not So Fast...

► The labor pool is growing more slowly, which means higher wages

► It’s “a matter of time before more guys get up to their 60s” and retire

American workers may finally start seeing some real wage hikes. That’s the view of a group of increasingly vocal economists who say a significant slowdown in labor force growth in the U.S. and abroad will put a premium on finding workers. “We’re going from a world of generally too much labor to a world of labor shortages,” says Mark Zandi, chief economist at **Moody’s Analytics**. Zandi says labor’s share of the economic pie has stopped shrinking

### As Fewer Join the Workforce, Workers Start to Benefit

Change in U.S. labor force from prior year



Share of nonfarm income going to workers



DATA: U.S. BUREAU OF LABOR STATISTICS

and will grow in the years ahead.

If Zandi and other economists turn out to be right, corporate profits will get pinched by rising salaries. Investors will have to adjust to a weaker earnings outlook, says Gad Levanon, a managing director at the Conference Board in New York. He adds that inequality might even be curbed, as the rich reap less from capital gains while employees earn more in wages.

That vision, a minority view at the moment, sharply contrasts with the scenario sketched out by technophobes and technophiles alike and popularized by such magazines as the *Atlantic*. They see increasingly sophisticated robots pushing workers out. “Technology will soon erase millions of jobs,” reads the cover of the *Atlantic*’s July-August issue.

In the future as seen by Zandi and economists such as Levanon and the University of Michigan’s David Lam, simple demographics will be the driving force. In perhaps an early sign of workers’ resurgence, labor’s share of the income of U.S. businesses—paid out in salaries and other compensation—rose to 56.7 percent last year, from a post-World War II low of 56.4 percent in 2013, according to data from the Department of Labor. From 2000 to 2014, workers saw their share of the total income of the economy—profits, wages, and taxes—shrink by more than six percentage points as they competed with lower-cost labor from China and other poorer countries and felt the impact of automation.

Thanks to declining birthrates, the global pool of young workers age 15 to 24 is contracting by about 4 million per year, according to the Geneva-based International Labour Organization, a United Nations agency that represents government, management, and labor. Says Ekkehard Ernst, a senior economist with the ILO: “Wage growth will have to accelerate, especially in those high-skill occupations where there is high demand.”

For work requiring computer or mathematics proficiency, there were five times as many U.S. positions posted in 2014 as there were unemployed people with the skills to fill them, according to the McKinsey Global Institute. More nitty-gritty industries are experiencing shortages. In trucking, young drivers aren’t joining fast enough to replace retirees. “It’s just a matter of time before more guys get up to their 60s and more people retire,” says David Boyer,

a 62-year-old driver with ABF Freight System. “We’re going to end up with a bigger shortage.” For the U.S. as a whole, the labor force has grown just 1.6 percent since the recession ended six years ago, as baby boomers retire. That compares with an advance of 10 percent in the 10 years prior, according to Labor Department data.

Japan and Germany have already seen the size of their workforces start to decline. Even China faces what Feng Wang, a professor at the University of California at Irvine, calls an “aging tsunami” that will shrink its workforce. “The global labor market is changing quite a lot,” says Lam, a research professor at Michigan’s Population Studies Center. “People haven’t quite picked up what’s happening.” That ebbing competition from abroad is good news for U.S. workers, says Lam. “The intense downward pressure on wages that’s come from the rest of the world is going to ease off a bit,” he says. —*Rich Miller and Sho Chandra*

**The bottom line** The world economy will face labor shortages as the growing scarcity of young workers drives up wages.

## Reform

### State Companies: Back On China’s To-Do List

► Thousands of state-owned enterprises gum up the economy

► “Beijing will not sell its crown jewels”

In the first years of his presidency, China’s Xi Jinping left the country’s state-owned enterprises pretty much alone. Some analysts think that could change. “It’s almost certain that the central government will roll out a specific plan for SOE reform in the second half of the year,” says Zhao Yang, a China economist for Nomura.

The impact of the SOEs on private enterprise is getting more damaging as the economy’s growth slows. “Many of China’s structural distortions, both economic and otherwise, are due to the dominating positions of the SOEs,” says Chen Zhiwu, a finance professor at Yale University and an adviser to China’s cabinet in 2007. State enterprises have “made competition unfair

and the legal system biased against private firms and individuals.” The 150,000 SOEs account for 17 percent of urban employment, 22 percent of industrial income, and 38 percent of China’s industrial assets, according to

**\$16t**

Assets held by  
state-owned  
enterprises in  
China

JPMorgan Chase. With \$16 trillion in assets, the SOEs do everything from building space-craft to trading silk. These enterprises, says BNP Paribas, are also big borrowers. BNP figures corporate debt, mostly owed by SOEs, rose to 167 percent of gross domestic product in 2014, from 97 percent in 2008. The state sector stands in the way of China’s transformation into an economy driven by services and consumption.

China’s recent stock market plunge shows how the government looks out for the SOEs. These companies dominate the stock market, and have gotten the biggest boost from government intervention. **PetroChina**, the biggest component of the Shanghai Composite index, has benefited from government-backed buying. Its stock jumped 19 percent in the first two weeks of July, even as the broader index sank 11 percent. Analysts say the stock was targeted for support, given its weighting in the index. One reason the government wanted a floor under stocks was to keep open a source of funds for China’s debt-burdened companies, most of them SOEs. Chinese companies announced at least \$226 billion this year in initial and secondary offerings.

The return on assets of SOEs ranges from a third to half that of private companies, says Nicholas Lardy, a senior fellow at the Peterson Institute for International Economics. “If the government wants to sustain reasonable growth, the efficiency of the state sector must improve or its size must shrink further,” he says.

In October the government will have a chance to discuss SOEs at the Fifth Plenum, when officials present the next five-year plan. In any reform, the authorities will maintain control of companies that dominate major industries such as rail, telecommunications, and energy. “Beijing will not sell its crown jewels due to their strategic

importance to the Communist Party,” says Chi Lo, greater China senior economist at BNP Paribas.

Less strategic businesses in retail, construction, metals, and real estate could be in for a bigger shakeup. Options include ending direct subsidies, allowing more private investment, and promoting better governance, says Zhu Haibin, Hong Kong-based chief China economist at JPMorgan Chase.

Some progress has been made. Last year state-owned **China Petroleum & Chemical Corp.**, known as Sinopec, agreed to sell a 29.9 percent stake in its gas station business to a group of 25 private Chinese investors. “China will not be rich being led by SOEs; it has to be led by the private sector,” says Francis Cheung, head of China and Hong Kong strategy for CLSA.

SOE reform has come in fits and starts. A push in the 1990s by then-Premier Zhu Rongji led to the closure of 60,000 such enterprises and 30 million layoffs. On a July 17 tour of state-owned clutchmaker **Changchun Yidong Clutch**, Xi hinted at a new resolve when he said any reform needs to be firm and fast and that state-owned enterprises shouldn’t adopt a “wait-and-see attitude.” —*Enda Curran*

**The bottom line** China may be getting ready to streamline, sell, or close many state-owned enterprises.

## Growth

### Jeb Bush’s Florida Magic Reconsidered

► The candidate says he can repeat the state’s performance nationwide

► Episodes of 4 percent GDP growth “are few and far between”

When GOP presidential candidate Jeb Bush is asked how he can double the U.S. economy’s growth rate to 4 percent, his answer is simple: “Check out my record when I was governor of Florida,” he says in a recent campaign website posting.

Florida’s economy did grow at a 4.4 percent annual pace from 1999 through the end of

2006, his years in office. Yet a housing bubble, not Bush’s tax cuts and other policies, was responsible for most of that growth, analysts say. “If there was a tax cut that could get the economy growing at 4 percent, any politician—whether it’s Jeb or Bernie Sanders—would be pushing it,” says Bruce Bartlett, an official in the Reagan and George H.W. Bush administrations. “But there’s not one. Period. Full stop.” Bush campaign spokeswoman Kristy Campbell, in a statement, called the former governor’s record “impressive,” citing economic and job growth, balanced budgets, and a AAA bond rating during his time in office.

GOP candidates Chris Christie, Ted Cruz, and Scott Walker have also embraced 4 percent or more as a growth goal. That’s due in part to “The 4% Growth Project” launched by George W. Bush’s presidential center. The project promotes policies to help low- and middle-income Americans without adopting policies Republicans hate, such as Obamacare.

The U.S. economy has grown at a 4 percent pace for five straight years only once since World War II, from 1962 through 1966. Four years of 4 percent growth occurred in the early 1950s and from 1997 through 2000. “Episodes of it are few and far between,” says Allen Sinai, chief executive officer of consultant Decision Economics. The Congressional Budget Office predicts that while growth could reach 2.9 percent this year and next, it’s likely to slide back in 2017 to the 2.2 percent it’s averaged since the end of the recession.

Almost one-third of Florida’s growth in the Bush years was generated by construction and real estate, according to U.S. Department of Commerce figures. Numbers from the Federal Housing Finance Agency show clear signs of a bubble, with Florida house prices rising during much of Bush’s tenure at twice the national pace, then falling sharply soon after he left office. Even assuming that some of the growth in construction and real estate was normal, Wells Fargo economist Mark Vitner estimates that a quarter of the state’s growth stemmed from the bubble, which bid up housing prices to





► unsustainable levels and drove employment and tax collections up.

If population rises 1 percent, the economy grows about 1 percent, too, according to Moody's Analytics. Florida's population grew at a 2 percent pace during Bush's tenure, compared with less than 1 percent for the U.S., adding to the state's rapid growth.

Bush says that as governor he cut state taxes by \$19 billion. A review of state records by the publication *Tax Analysts* shows \$13 billion worth of cuts. The difference, according to PolitiFact Florida, an independent political fact-checking website, is that the Bush campaign's figure includes what Floridians saved from the elimination of the federal estate tax, which Bush's brother, George W., got through Congress in 2001.

The largest reductions Governor Bush made were in Florida's tax on "intangibles," mostly stocks and bonds. That accounted for almost \$2 billion of his tax cut total and resembled his brother's cuts on federal capital-gains and dividend taxes. "It's an open question what the magnitude of the effect of tax cuts on capital is," says Alan Auerbach, a tax economist at the University of California at Berkeley. "What's not open is whether they can cause the economy to consistently grow at 4 percent. They can't."

—Peter Gosselin

**The bottom line** The success of Florida's economy under Jeb Bush was made possible by a housing bubble and population growth.

## Borders

### Building Walls to Keep Terrorists Out

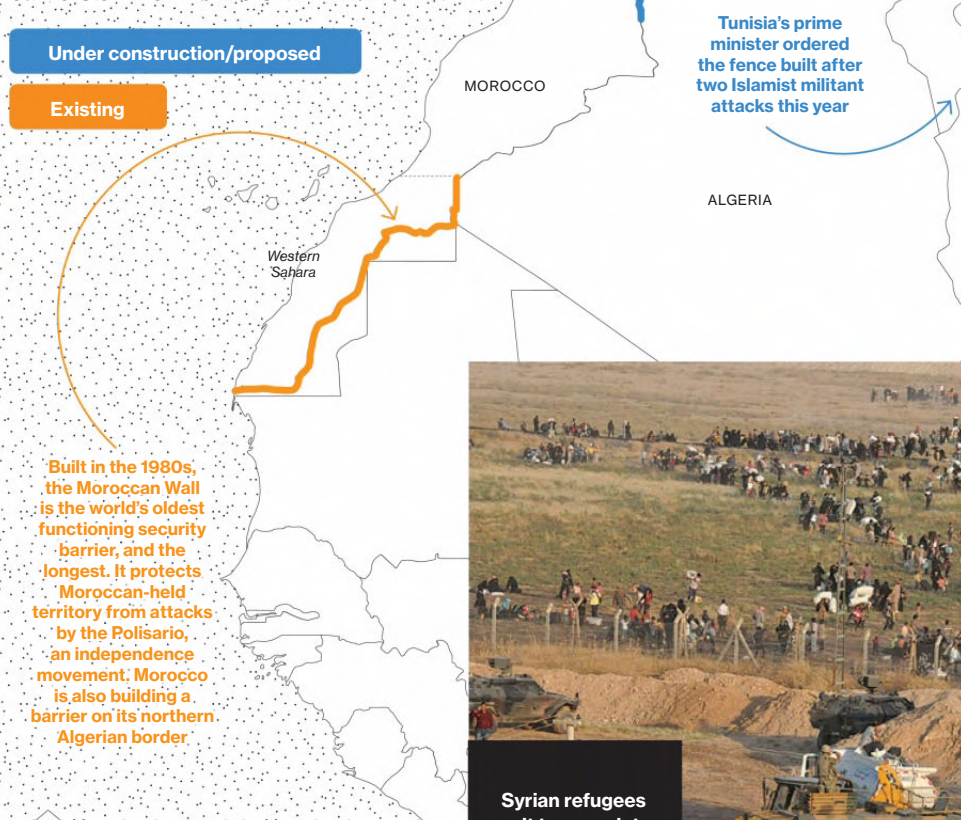
► Countries in the Middle East and North Africa are building barricades

► "This has an immediate impact on migrants"

With the threat of modern jihadist violence rising, many countries are retreating behind one of the oldest forms of defense: walls. Tunisia announced it's building a heavily secured fence with trenches and watchtowers along a 100-mile stretch of its border with Libya after militants on June 26 attacked a Tunisian beach resort, killing 38 tourists. The

### A Fortified Middle East

As extremist violence spreads in the region, governments are erecting barriers on their frontiers

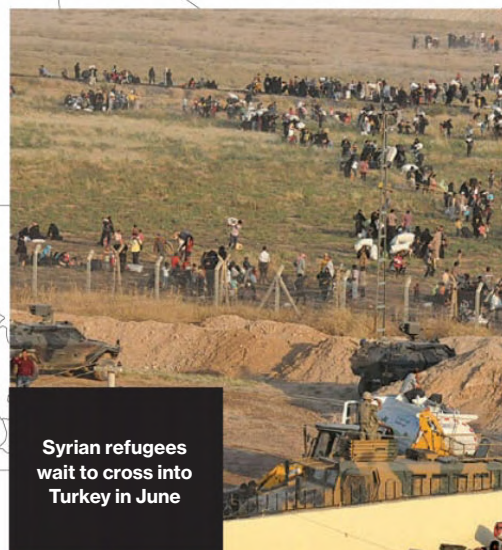


attackers were Tunisians trained in Libya. Turkey said it will fortify its border with Syria with barriers that will include surveillance facilities after a suicide bomber killed more than 30 civilians in the Turkish border town of Suruc on July 20.

From Morocco to Saudi Arabia, fortifications are being built at a rate not seen since the months following the Sept. 11 attacks, when border construction projects in the region increased to stop the movements of militants from one country to another. "The Middle East and North Africa is now the most walled region in the world," says Said Saddiki, a professor of international relations and international law at Al-Ain University of Science and Technology in Abu Dhabi.

Fear of Islamic State and concern over its success at recruiting Muslim extremists throughout the region has spurred many of the projects. The group has built its own walls, including ones around the Iraqi cities of Tal Afar and Mosul, to fend off attackers and prevent people from escaping IS rule.

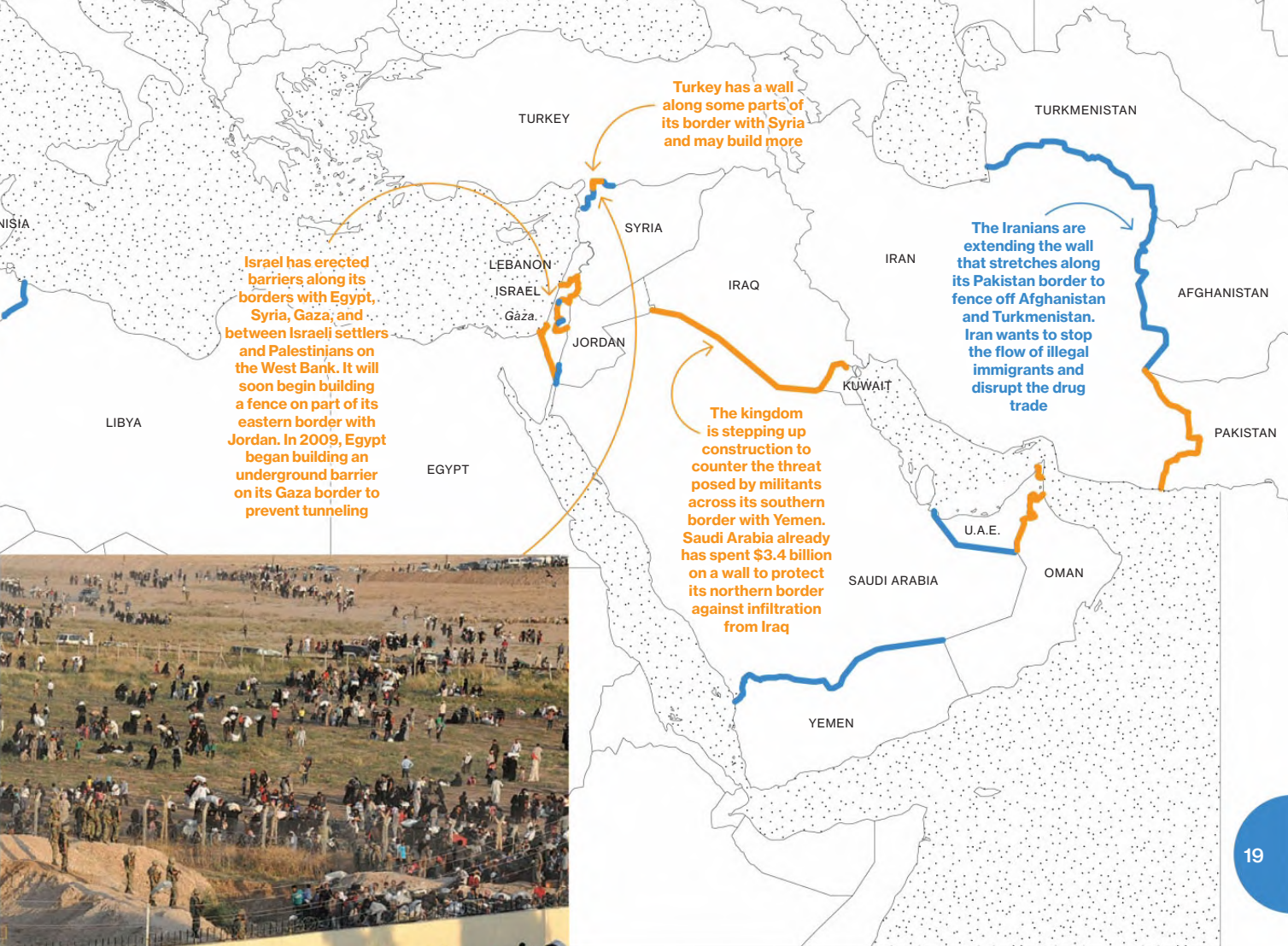
Fences offer a quick fix, analysts



say, but do little to address problems in the long term—and they're expensive. A fence built by Saudi Arabia along its northern border with Iraq, including observation towers with cameras and motion detectors, cost \$3.4 billion. Tunisia Prime Minister Habib Essid says his government will pay local contractors at least \$5 million for the fence and about \$76 million more for advanced surveillance equipment. The project will be completed by yearend, the government says.

To work, such barricades need cross-border cooperation, says Brent Sterling, a professor at Georgetown University and the author of *Do Good Fences Make Good Neighbors?* Sterling cites Israel's wall along its western border with Egypt. The Israeli





government says the wall, completed in 2013, led to a 99 percent reduction in the number of illegal border crossings in the first half of 2013 from the same period in 2012. But these barricades lessen the incentives for governments to come up with more permanent solutions to border problems and conflicts, Sterling says. In the fight with jihadist movements such as Islamic State, in which would-be militants are often homegrown and indiscernible from other people, and instruction or indoctrination can happen over the Internet, barriers are especially ineffective. “Wall builders are just trying to improve their leverage and hope for the best,” Sterling says. “They aren’t a panacea.”

The government in Tunis has vowed

tancy among some local Tunisians who see their government failing them.

Barriers can exacerbate problems in border zones by creating opportunities for smugglers, who can charge more to get people across a border, says Elisabeth Vallet, a scholar at the University of Quebec in Montreal and author of *Borders, Fences and Walls*. “This has an immediate impact on migrants, who find themselves at the mercy of smugglers and less familiar terrain,” she says. And the walls can drive refugees to take longer, more dangerous routes, says Elizabeth Collett, director of the Migration Policy Institute Europe. “From a smuggler’s point of view, government decisions to increase border controls without addressing the more complex

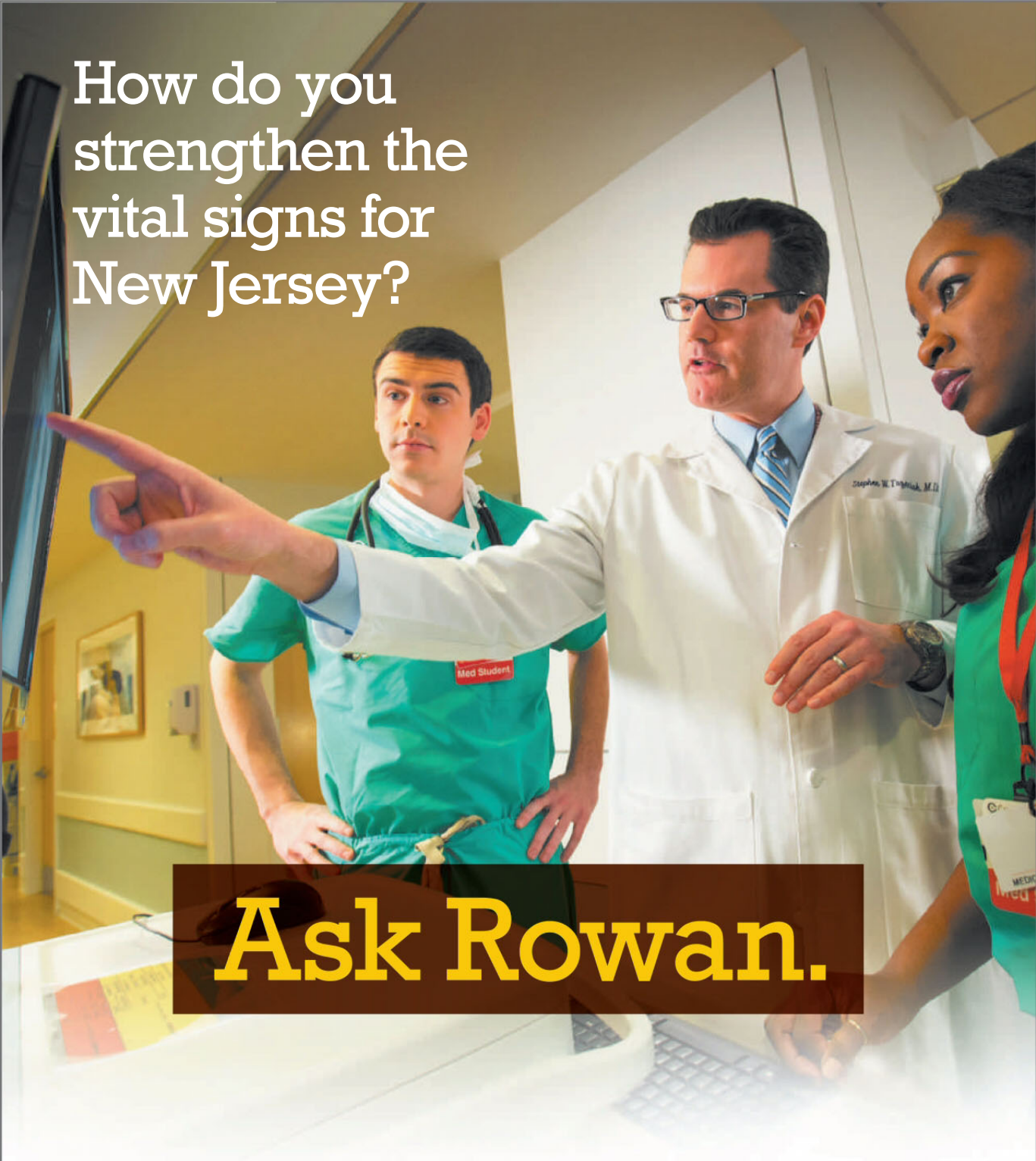
dynamics can be beneficial to their business models,” she says. Turkish Deputy Prime Minister Bulent Arinc says his government is focused on stopping smugglers as well, and the wall it’s building will help. The government has identified what it calls critical sections of the 566-mile frontier where the barrier will be built.

The price tag for Turkey’s wall: about \$2 billion, according to Daily Sabah, a Turkish news site. The costs rise when factoring in maintenance and border patrols. Says Liza Schuster, a lecturer at City University London: “If we spent money on acquiring good intelligence or addressing some of the social and economic problems that create it rather than building walls, we’d be economically, socially, and morally much better off.” —*Salma El Wardany and Caroline Alexander*

**The bottom line** Building walls to stem the movement of militants is costly and can be ineffective in the long run.

**B** Edited by Christopher Power and Dimitra Kessenides  
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Pâté too rich?  
Give duck dogs  
a try 22

Bratz dolls are strutting  
down the toy aisles  
again 24

To get more leg room,  
upgrade to a private  
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Briefs: In Hong Kong,  
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## Tinseltown East

Chinese filmgoers  
wearing 3D glasses  
watch *Monster Hunt*  
in Shanghai on  
July 26

► Chinese audiences are growing, more theaters are being built, and the movies are getting better

► “There’s a growing commercial value and slickness to the Chinese films”

Since mid-July, the biggest movie outside the U.S. hasn’t featured a Marvel superhero or dinosaurs from a revamped franchise or even an American action star. It hasn’t been an American film at all, but a Chinese animation/live-action fantasy, *Monster Hunt*, about a **baby monster** smuggled through ancient China. Directed by Raman Hui, a director of **DreamWorks Animation’s** *Shrek the Third*, *Monster Hunt* opened in China on July 16 and immediately broke records: Its Saturday, July 18, tally of \$29.8 million stands as the biggest single-day gross for a Chinese film and tops the opening day take of many Western hits, including 2014’s *Transformers: Age of Extinction*, which grossed \$27 million on its first day.

Ticket sales have reached \$211 million, making *Monster Hunt* the highest-grossing Chinese movie ever and, with a \$40 million budget, profitable, too.

*Monster Hunt*, produced by Hong Kong studio **Edko Films**, isn’t the only domestic hit lighting up Chinese box offices. Superhero parody *Pancake Man*, directed by and starring popular online comedian Da Peng, has brought in \$132 million since opening on July 17—its budget was \$13 million. The movie was released by privately owned **Wanda Media**, the film and TV production arm of Wanda Group, one of the country’s biggest conglomerates. The two movies’ success reflects both the growth of Chinese audiences and the maturing of the nation’s film industry. On July 18

the Chinese box office hit \$70.2 million in one day, almost all from local films. “You’re seeing Chinese filmmakers getting better at their craft,” says Rance Pow, head of the film industry consulting firm Artisan Gateway.

With its mix of government-controlled enterprises and independent companies, the Chinese system looks very little like Hollywood. Longtime Hong Kong producers such as Edko regularly collaborate and compete with mainland giants **Wanda**, **Huayi Brothers Media**, and **Bona Film Group**, as well as the powerful state-owned entities such as **China Film Group**, which controls the importing and distribution of foreign films and produces its own. Internet companies **Baidu**, **Alibaba**, **Tencent**, ►





## A Stubborn Appetite for American Blockbusters

Highest-grossing films of the year in China

Year	Top-grossing Chinese-language film	Top-grossing import
2011	<i>The Flowers of War</i> \$97m	<i>Transformers 3</i> \$173m
2012	<i>Lost in Thailand</i> \$204m	<i>Titanic</i> \$153m
2013	<i>Journey to the West</i> \$201m	<i>Iron Man 3</i> \$124m
2014	<i>Breakup Buddies</i> \$188m	<i>Transformers 4</i> \$306m
2015*	<i>Monster Hunt</i> \$220m	<i>Furious 7</i> \$391m

Heavily marketed, this sequel made more in China than it did in the U.S.

\*YEAR-TO-DATE, WITH MONSTER HUNT STILL IN THEATERS  
DATA: ARTISAN GATEWAY

◀ and others are getting in on the action as producers and distributors.

All this investment and integration has led to improved scripts and greater diversity in an industry known for martial arts films and period spectacles. Today, feel-good fantasies such as *Monster Hunt*, which one *Hollywood Reporter* critic dubbed “a sentimental dollop of easily digestible moral storytelling,” succeed alongside comedies like *Pancake Man*, with Jean-Claude Van Damme as a villain. “There’s a growing commercial value and slickness to the Chinese films,” Pow says.

Chinese films benefit from state support. The industry is managed by several government-controlled entities, including the State Administration of Radio, Film and Television, the Censorship Bureau, and China Film Group. Moratoriums on foreign productions regularly clear the release calendar of Western blockbusters so domestic films have unfettered access to audiences. And they ensure Chinese movies make up about 55 percent of the annual box office. There are three blackouts annually—during the Lunar New Year/spring festival period in February; in mid-to-late summer, after the first wave of Hollywood summer releases opens in China; and in December. The current blackout is expected to go until late August, when *Terminator: Genisys* will open, followed by *Mission: Impossible—Rogue Nation*, *Minions*, and *Inside Out*.

China’s stock market crash isn’t discouraging film fans. “Moviegoing tends to be recession-proof,” says Phil Contrino, vice president and chief analyst for BoxOffice.com. “Despite the turmoil in the Chinese economy, people are still going to the movies.”

About 15 new screens open daily in China. There are 5,660 cinemas with 28,000 screens serving 1.3 billion people. The U.S. has about 40,000 screens for a population one-fourth the size. Wanda Group is the biggest theater owner in China and the

world, with more than 150 venues and 1,300 screens on the mainland. (It’s been a big player in the U.S. since 2012, when it bought AMC Entertainment.) From January to March, China built 554 movie houses, with 2,806 screens.

Construction until recently was centered in first- and second-tier cities, with populations of 3 million and higher, Pow says. “So the cinema development is expanding into tertiary markets now, into suburban and rural areas,” he says. “When a town gets a new shopping center, they get a new McDonald’s, KFC, Starbucks, and a new movie theater.” By 2017, China is expected to have about 9,500 theaters and 53,000 screens.

The building frenzy started about a decade ago, says Jonathan Landreth, a former Asia editor of the *Hollywood Reporter* and now managing editor of Chinafile.com, an online general interest magazine. Until that time, people bought pirated DVDs and stayed at home. “You went to the movies maybe once a year. It was an end-of-year tradition,” he says.

In what may be a sign of things to come, China’s monthly box office receipts for February passed those of the U.S. for the first time. Powered by the Lunar New Year holiday, the biggest time for moviegoing in China, February’s total box office hit \$650 million, compared with \$640 million in the U.S., according to Chinese research firm ENT Group.

That will start to happen more, say industry analysts, presenting both an opportunity and a challenge for Hollywood studios, all of which are trying to expand in China. Cooperating with state players is essential for foreign studios to succeed. China Film Group, which controls release dates and determines the number of screens a film will play on, took a 10 percent stake in Universal’s *Furious 7*, which opened on a record 5,454 screens on April 12. Thanks to the company’s support, the film had no major competition for a month, save for the Johnny Depp flop *Mortdecai*, which didn’t make a dent. Even

*Avengers: Age of Ultron* had to move out of the way, premiering in China almost two weeks after it had opened in most of the rest of the world. *Furious 7* is now the highest-grossing film in Chinese history.

Hollywood has been navigating the Chinese market in increasingly creative ways, including by producing more films with Chinese partners and by casting more Chinese actors, such as star Li Bingbing in *Transformers: Age of Extinction*. Major scenes of that movie were shot in China, and there’s even dialogue praising the Chinese state. The private equity firm **China Media Capital** has struck deals with **Warner Bros.**, DreamWorks Animation, and **IMAX**, and **Shanghai Media Group** has signed contracts with **Walt Disney**, among others. Next year’s animated *Kung Fu Panda 3* will be produced partly in China, using Chinese animators and designers, via Oriental DreamWorks, a new Shanghai-based animation studio.

“Hollywood makes global products, and for the Chinese market to reach its full potential, Hollywood films and homegrown films will have to thrive side by side,” says Contrino. “The growth of the Chinese market means that both industries will be able to reach new levels of success.” —*Bilge Ebiri*

**The bottom line** Bigger and better local films and growing audiences in China have created a huge movie market to rival Hollywood.

## Food

## Forget Confit. How About a Duck Dog?

▶ High-end food purveyor D’Artagnan pursues selling to the masses

▶ “We want to be ahead of the curve, but not so much that we can’t sell”

Over the past 30 years, Ariane Daguin has built her company, **D’Artagnan**, into a thriving business selling foie gras, wagyu beef, and milk-fed pork to some of America’s top restaurants, from Mario Batali’s Babbo in New York to Restaurant August, a favorite of New Orleans gastronomes. The popularity of D’Artagnan’s pricey, high-quality fare among noted chefs and restaurateurs (think Daniel Boulud and Danny Meyer) has helped fuel its sales beyond the toque-wearing crowd. About 30 percent of the



"It could be that one day the customer at Walmart will understand the difference in quality. Today that isn't so."  
—Ariane Daguin

"Duck. Duck. Confit."

30%

Share of non-restaurant sales, through stores and online

250<sub>k</sub>

Number of ducks raised annually at Cochection Farm

company's almost \$100 million in annual revenue comes from sales to specialty stores and supermarkets plus a growing online business. Now Daguin is pursuing a bigger target: Middle American diners.

To woo average consumers who eat at home, she's added premium-priced burgers, bacon, and hot dogs to D'Artagnan's lineup. She's also launched a breezy website designed to appeal to Americans who crave quality food, and she's pushing further into mainstream grocery stores. While the presentation or distribution might be different, the French-born entrepreneur is sticking with expensive ingredients—and the resulting high prices. While duck confit at \$14 a leg may be a stretch for Safeway shoppers, D'Artagnan is betting they might try a \$10 package of six uncured duck hot dogs and trade up later. Daguin knows that could be a tough proposition. "It could be that one day the customer at Walmart will understand the difference in quality," she says. "Today that isn't so."

Daguin, 57, grew up in Gascony, famous for foie gras and a cuisine heavy on duck and goose fat. Her family has made and sold food for seven generations. Flavor is paramount, says Daguin, who recalls almost breaking down in tears upon tasting American chicken while working as an au pair in Connecticut in the late 1970s. "I

just wanted a chicken that wasn't bland and mushy," she says. In 1985, after dropping out of Barnard College, she started D'Artagnan. Before long she was supplying big-name chefs in New York, who appreciated her commitment to traditional husbandry without antibiotics.

At Cochection Farm, a 5-acre spread about 115 miles north of Manhattan that supplies D'Artagnan exclusively, Daguin has worked hard to create a better duck. The standard Pekin Long Island-style variety, popularized in the U.S. after World War II and genetically modified to grow faster and make more money for farmers, features "pale, mushy meat," she says. So she spent two years breeding Muscovy, Pekin, and mallard ducks into a new variety she calls Rohan. Each duck at Cochection gets 3 square feet of living space, about three times that of conventional farms. And the birds are raised for 11 weeks, twice as long as standard ducks. Rohan ducks are fatter and tastier and at least twice as expensive to produce—even though they eat cheaper natural feed, not the organic variety. That's a cost-saving compromise that might alienate organic purists, but Daguin is unrepentant. "Husbandry makes the taste, not the



feed," she says. "We want to be ahead of the curve, but not so much that we can't sell enough for it to make economic sense. It's an art."

D'Artagnan's revenue has more than doubled in the past five years, while Web sales have quadrupled, the company says. With big U.S. food companies looking to add natural and organic options to their portfolios, Daguin says she's rebuffed several calls from prospective buyers. "I'm having too much fun," she says. "I like money, but how much do I need? I have a Mini Cooper; I don't need a Mercedes."

D'Artagnan is a natural fit for upscale grocers, and its wares are prominently displayed in stores such as **Wegmans Food Markets**. You won't find D'Artagnan in **Whole Foods Market**, however. Daguin says the chain declined to carry her products because of her outspoken support for foie gras pâté, made from the livers of force-fed geese. Whole Foods says it has rigorous quality and animal treatment standards.

The challenge for Daguin will be to find enough supermarket shoppers willing to pay top dollar for her products when cheaper alternatives abound. At **Costco.com**, grass-fed organic rib-eye from Rastelli Foods is \$16.25 a pound. ►



◀ On D'Artagnan's website, pasture-raised boneless rib-eye is almost \$28 a pound. "It's a stretch for a customer to go to Walmart looking for duck bacon or quail," says Billy Roberts, a food analyst at researcher Mintel Group. "But in a specialty store, customers are willing to pay a premium for the products. It's a matter of finding the right consumer."

D'Artagnan is eschewing expensive advertising in favor of relying on local buzz generated among shoppers—who increasingly are asking where food is from and how it's raised—as it expands its restaurant sales across more of the country. "We're iconic to chefs, but we're basically unknown to consumers," says President Andy Wertheim, a veteran of Kellogg and Progresso soup. Still, he says, "We think we can compete in the mainstream arena."

—Craig Giammona

**The bottom line** About 70 percent of D'Artagnan's sales are to restaurants. The food supplier wants to lower that share.

### Toys

## Playtime's Bad Girls Get Another Chance

► Bratz dolls, the anti-Barbies, are back and targeting connected kids

► "The fashion doll aisle is as crowded as it's ever been"

A decade ago, **MGA Entertainment** turned the toy business on its head when its Bratz dolls briefly snatched the fashion doll segment's sales crown from longtime leader Barbie. The Bratz recipe of long legs, short skirts, and way too much makeup made the sassy crew the perfect toys for girls who didn't want to play nice. But after an intellectual-property lawsuit brought by Barbie producer **Mattel** got the interlopers pulled from the market briefly in 2009, Bratz never regained its mojo. MGA put the brand, which had an estimated \$1 billion in sales in 2005, on hiatus in 2014.

Now MGA is reviving Bratz, but this time it faces a tougher challenge than simply again positioning the dolls as a foil to All-American Barbie. Today's kids are a plugged-in group who prefer customizable

features over one-size-fits-all playthings. They also have apps and other digital entertainment competing for attention. "Of course, they still play with toys and do imaginative play, but they're digitally connected," says MGA Chief Executive Officer Isaac Larian. "We're bringing those two things together in many ways."

The revamped dolls are supported by digital tie-ins: a mobile app that lets girls create customizable Bratz emojis and watch online stop-motion videos featuring the dolls. The new #selfiestyles line of dolls also comes with mobile phones and earrings shaped like hashtags. And yes, there will be a Bratz selfie stick.

This isn't Bratz's first comeback bid. The dolls got a modesty makeover in 2010 that added leggings under short skirts and swapped halter tops for long sleeves. MGA also experimented with new doll bodies, logos, and slogans before again pulling the brand from shelves in 2014.

Larian says the company lost "the DNA of the product." So MGA has brought back the chunky purple Bratz logo it scrapped in 2013 and made sure the new lines included the four main dolls that made their debut in 2001, returned to their original 10-inch size. MGA is planning a marketing push for the new dolls that will include **YouTube** spots, TV ads, and a new website.

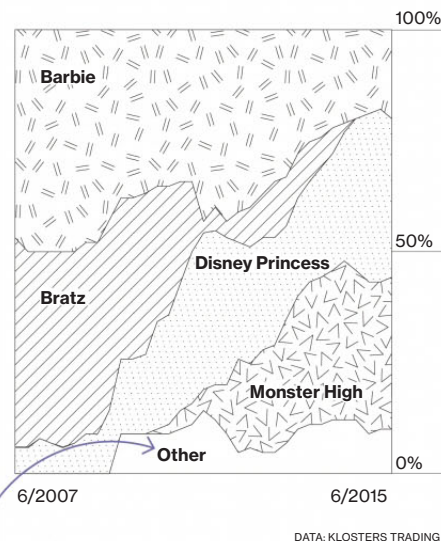
For Mattel, the renewed competition comes as it's staging its own turnaround. With the 56-year-old Barbie doll struggling to connect with modern girls, sales plunged 19 percent in the second quarter from the previous year, to \$130 million. Mattel plans to update Barbie's image with a Web-connected version this year.

The initial legal battle between Mattel and MGA stemmed from an allegation that the Bratz creator worked at Mattel when he came up with the concept. Mattel sued MGA in 2004. In the fight's latest iteration, MGA is seeking \$1 billion from Mattel, saying the company keeps a "how-to-steal" manual to help employees collect trade secrets about Bratz at toy shows. The suit, filed in January 2014, is ongoing. Mattel has said the suit's claims are "stale."

Jim Silver, who runs toy review website **TTPM**, says the fierce competition means it may be hard for Bratz to regain its former glory. "There's always opportunity—the question is what size will that opportunity be," he says. "In terms of brands, the fashion doll

### The New Girls in Town

Retail market share of fashion dolls, including online sales



aisle is as crowded as it's ever been."

The 6- to 11-year-old girls who once adored Bratz can now choose among

**Disney Princess** and **Frozen** dolls, **Hasbro's** My Little Pony Equestria Girls, and Mattel's Monster High and Ever After High dolls.

Larian isn't worried. Today's girls look for dolls they can customize with mix-and-match styles and share on social media, he says. "That creates a wide space for Bratz, for self-expression and creativity," he says. "We're basically going to be where the girls are with this brand." —Claire Boston

**The bottom line** The Bratz line, which peaked in 2005 with an estimated \$1 billion in sales, is betting its comeback on Web-friendly dolls.

### Airlines

## Delta Offers the Ultimate Upgrade: A Private Jet

► Using idle business jets may cement ties to its most-lucrative flyers

► "Nobody else can do what we're talking about doing"

An airline's best customers are long used to being moved to the front of the plane. Now **Delta Air Lines** has come up with what may be an even more appealing upgrade: the ability to skip a commercial flight altogether and board a private



## Briefs

By Jennifer Chaussee

## New Roads

● 🚗 ● *General Motors* will invest \$5 billion to expand its Chevrolet lineup in emerging markets. The company will make cars with Chinese partner *SAIC Motor* that are globally appealing instead of offering models designed for specific regions. GM plans to sell 2 million cars a year through 2030 with the new program.

● 🕶 ● Luxury companies *Burberry Group* and *Kering*, which owns Gucci, are calling on landlords to lower store rents in Hong Kong as sales slump.



Actress Jane Birkin demanded that **Hermès International** rename the bestselling bag bearing her name, objecting to the way crocodiles are skinned to make it. The \$68,000 bag is the world's priciest.

jet. Beginning in late July, passengers who've achieved at least "medallion" status in Delta's SkyMiles frequent-flyer program (25,000 miles or 30 segments, and \$3,000 in spending on Delta services, annually) will be eligible for the upgrades, which cost \$300 to \$800 above the ticket price, depending on the destination. That's less than a typical private jet flight, which averages about \$5,500 per hour. "Nobody else can do what we're talking about doing," says James Murray, vice president for operations at Delta Private Jets (DPJ), which usually operates charter services bought by a flyer or corporate travel department.

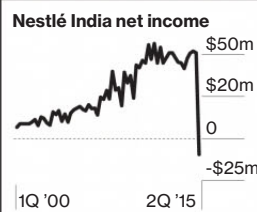
Delta's decision to coordinate some of its commercial traffic with its 66-aircraft private jet unit is part of the airline's focus on differentiating its product and showering its most profitable customers with ever-higher levels of perks and amenities. Delta already drives its best customers on the tarmac from one flight to another in Porsches, allowing them to bypass the airport terminal gantlet.

The upgrades could also help Delta solve one of the costliest problems in private aviation, known as "empty legs," or the need to reposition a jet without having a customer headed to that location. Such trips account for about a third of all private jet flights. Most of the upgrades will involve travel scheduled the next day, though DPJ says it will offer some with as much as 48 hours' notice. While DPJ has regulatory approval to fly Delta passengers on 160 domestic routes flown by the larger airline, it plans to begin mainly with flights serving Atlanta, New York, and Cincinnati.

Executives at the Delta unit are keen to see if they can use software to match routes with its mainline parent and harvest some of Delta's most profitable customers—many of whom might not have flown privately before but could afford to. Says Cyril Turner, DPJ's chief executive officer: "The hope is that once someone flies private, and they don't have to go through TSA, and they have the experience, then they may determine that they want to fly private more often." —Justin Bachman

**The bottom line** Delta will offer its best customers \$300 to \$800 upgrades to flights operated by its 66-plane private jet unit.

**Nestlé India** reported a quarterly loss of \$10.1 million, its first in 15 years, following a government recall of its popular Maggi instant noodles in June. The company is challenging the recall in a Mumbai court.



Demand for pricey goods has plummeted in the city since China began cracking down on government officials' extravagant spending in 2012 as part of an anticorruption push. Hong

Kong accounted for more than 10 percent of Kering's luxury sales in the first half of 2015. ● 🌐 ● Insurance companies *Coface* and *Euler Hermes Group*, which sell credit insurance to vendors, are cutting back on coverage for Toys "R" Us suppliers. Vendors to the ailing retailer risk losing money if they ship without credit insurance, which protects them in case the company fails to pay. After two years of losses, Toys "R" Us scrapped plans to go public in 2013. ● 🚗 ● *Pfizer* ended plans to sell its cholesterol pill Lipitor, once the world's top-selling drug, over the counter after a trial showed patients didn't take the statin correctly without a doctor's supervision.

● 📱 ● *Coca-Cola*, the food industry, and farm-lobby groups spent \$15.3 million this quarter to fight a government recommendation to cut U.S. consumers' sugar and meat consumption, outspending proponents of the recommendation by \$14.2 million. New federal nutritional guidelines are pending.

## CEO Wisdom

"There are times in your career when you have to decide what's important to you personally. You have to know your boundaries."



**David Taylor**, incoming Procter & Gamble CEO, on turning down an early promotion so his kids wouldn't have to change schools



August 3 — August 9, 2015

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- The USPS has become an extension of Amazon and is courting other e-commerce giants
- “We’ve been trying to get the Postal Service to do this kind of thing for years”



Rand Paul bypasses the GOP's data trove to build his own 28

Fishermen need a better safety net 29

Drilling for cash, Congress strikes oil—at a bad price 30

A Bill: Because people are dumb enough to fly drones in a wildfire 31

In cities such as San Francisco and New York, letter carriers have been showing up on people's doorsteps as early as 3 a.m. bearing unusual cargo: milk, eggs, and other perishable items. The U.S. Postal Service has been delivering groceries to customers of **Amazon.com** in selected areas since October 2014. "It's just leveraging our infrastructure," says Megan Brennan, who was sworn in as America's 74th postmaster general in March, becoming the first woman to hold the job in the institution's 240-year history. "We're on people's doorstep six days a week, seven days a week in some cases. It's just a logical progression."

A former letter carrier from Pottsville, Pa., Brennan is trying to transform the USPS into a delivery service for the e-commerce era. That means hauling fewer letters and more packages. It means showing up with them at once-unheard-of hours and even on Sundays. "Amazon is the first," Brennan says. "But we're obviously looking to get additional customers who are interested in that type of customized delivery."

Brennan's predecessor, Patrick Donahoe, announced in November 2013 that the Postal Service would do deliveries for Amazon seven days a week. Since then, the Seattle giant has assembled a network of more than 15 facilities where it sorts packages it then trucks to nearby post offices, so letter carriers can take them the rest of the way. Amazon said in a recent regulatory filing that it plans to build more of these sorting centers this year.

The USPS doesn't disclose much about its relationship with Amazon, citing confidentiality agreements. Amazon didn't respond to several requests for comment. David Vernon, an analyst at Bernstein Research who tracks the shipping industry, estimates the USPS handled 40 percent of Amazon's volume last year—or almost 150 million items—more than either **United Parcel Service** or **FedEx**. He figures that Amazon pays the USPS \$2 per package, which is about half what it would pay UPS and FedEx. Vernon says Amazon receives a deep discount from the USPS because the e-tailer does so much of its own processing—including providing

## How Amazon Gets to Your Door

Estimated share of Amazon's packages delivered by:

USPS

40%

UPS

20%-25%

FedEx

15%-20%

DATA: BERNSTEIN RESEARCH

computerized address lists to make it easier for carriers to tailor their delivery routes for faster drop-offs. "I think [Amazon's] idea was, why give this volume to FedEx when we can just sort it ourselves?" Vernon says. "Because it's not that hard."

Brennan needs all the new business she can get. In 2014 first-class mail volume fell 3 percent compared with the previous year, to 64 billion pieces. Advertising mail, which some people refer to as junk mail, remained essentially unchanged. But the USPS's package volume climbed 8 percent from the year before, to 4 billion items, and accounted for 20 percent of the agency's \$68 billion operating revenue.

Yet as its package volume rises, the USPS has had to invest in new equipment. Last year it spent \$200 million to furnish its carriers with 270,000 Internet-connected handheld scanners made by Honeywell that enable them to provide real-time package tracking. "The Postal Service is far more technology-centric than most people would understand or believe," Brennan says. The agency is also hoping to replace its fleet of 189,750 delivery trucks, most of which are 25 years old and not configured to hold packages. The USPS Office of the Inspector

General estimates this will cost more than \$5 billion.

These expensive upgrades come at a time when the USPS is essentially broke. It expects to lose \$6.1 billion this year and as of late March had only \$6 billion in cash, enough to keep running for 22 days.

Brennan has been quietly calling on various political leaders and special-interest

lobbyists in Washington whose support she needs to fix her troubled agency. A top priority: getting Congress to pass legislation that would require USPS retirees to use Medicare as their primary health insurance. This would eliminate the need to pay \$5 billion a year to fund future retiree health benefits, as the agency is now required to do by law. It hasn't been able to make the payments since 2011.

The USPS's package growth gives Brennan something more pleasant to discuss with lawmakers and lobbyists than the inexorable decline of first-class mail. Even conservative Republicans, who object to proposals championed by U.S. Senator Elizabeth Warren (D-Mass.) and others for the USPS to get into new businesses such as banking, want to see the agency deliver more e-commerce-generated boxes. "Nobody ever said they shouldn't be delivering packages," says Jason Chaffetz (R-Utah), chairman of the House Committee on Oversight and Government Reform, which oversees the USPS.

Postal union leaders, who don't always see eye to eye with management, are similarly enthusiastic. "We've been trying to get the Postal Service to do this kind of thing for years," says Brian Renfroe, director of city delivery for the National Association of Letter Carriers.

The USPS says it's making Sunday deliveries for other companies, which it refuses to name. But it may be a while before Brennan lands another client as big as Amazon, which, besides the sorting centers, has 50 enormous distribution warehouses across the U.S. "The only company in America right now that has so many distribution centers purely for e-commerce is Amazon," says Marc Wulfraat, founder of MWPVL International, a logistics consulting firm in Montreal. "**Wal-Mart's** probably the next-biggest player with, say, six or seven, and it drops off real fast after that."

In the meantime, the USPS is tethered to Amazon, a company that

## Brennan's CV

### 1986

Joins USPS as a part-time letter carrier in Lancaster, Pa.

### 2005

Appointed vice president for Northern Area Operations

### 2011

Promoted to chief operating officer

### 2015

Sworn in as postmaster general

### Education

B.A. from Immaculata College; MBA from MIT's Sloan School of Business



◀ isn't just a customer—it's also a competitor. In cities such as New York and Washington, where the USPS is testing same-day delivery, Amazon offers a similar service. The e-tailer has its own AmazonFresh grocery delivery trucks. And it's seeking permission from the Federal Aviation Administration to make deliveries using aerial drones. Given its gargantuan ambitions, Amazon could even recruit its own army of delivery people. But Brennan isn't concerned about that. The last thing Amazon Chief Executive Officer Jeff Bezos probably wants to do now after building all those sorting centers is hire more than 300,000 men and women to carry packages like the USPS. Even in the age of Amazon, that's the Postal Service's undeniable edge. —*Devin Leonard*

**The bottom line** The U.S. Postal Service handled an estimated 40 percent of Amazon's deliveries in 2014.

## Campaign 2016

### Rand Paul's Bid for Data Independence

▶ The candidate isn't sharing voter info with the Republican Party

▶ Paul resists "becoming part of the Washington machine"

Kentucky Senator Rand Paul is living up to his promise to run for president as a "different kind of Republican." Paul's campaign has decided that he can win the nomination without much help from the Republican establishment. And that he's not going to help them either.

Both political parties enter into data agreements, designed to allow candidates access to their voter databases. In exchange, candidates typically pledge that after the election they'll enrich the database by contributing whatever intelligence they gather about voters during the campaign. Thus far, 11 Republican presidential hopefuls have signed contracts to receive voter profiles from the Republican National Committee,

according to a party official who asked not to be named. More are expected to do so in the coming weeks: Aides to Ohio Governor John Kasich, who joined the race on July 21, have already held discussions with the RNC about getting access to its data, according to a person familiar with the talks.

Campaign records indicate that Paul is following a path that will allow him to maintain full control of any data collected by his campaign or affiliated super PAC, enabling him to establish an independent power base beyond 2016.

Thanks to conservative donors Charles and David Koch, Republican presidential candidates can now opt out of working with the RNC. For the past couple of years, the billionaire brothers and their allies have been pouring money into a competing voter database called i360. A spokesman for Freedom Partners, the group that manages i360, refused to identify clients, citing nondisclosure agreements. But in an April interview with *USA Today*, Charles Koch named Paul among five Republican candidates he said "are the ones we have talked to the most." The other four he identified were former Governor Jeb Bush of Florida, Governor Scott Walker of Wisconsin, Senator Ted Cruz of Texas, and Senator Marco Rubio of Florida. All except Paul have already inked data agreements with the RNC. (Campaigns are free to work with both outfits but must sign contracts ensuring their data sets are not commingled.)

The quarterly spending report Paul's campaign filed on July 15 supports the notion that the candidate is building a data strategy independent of the RNC. He's paid \$19,000 to **Aristotle**, a non-partisan data vendor. The filings also list a transaction with the Republican

Party of Iowa, which maintains a list of past caucusgoers. Filings from Concerned American Voters, a new super PAC affiliated with Paul, show payments to i360, including one for "voter data and outreach capability."

The RNC and the Koch network are competing for dominance in conservative politics. Although the party's database and i360 both draw from publicly available voter-registration records, they have different strengths. The RNC has maintained its voter file for a quarter-century, constantly augmenting it with information collected from canvassing and phone surveys about voter behavior and attitudes on candidates and issues. Want to know which Iowa voters told McCain-Palin volunteers that bailouts were their greatest concern? Talk to the RNC. The much newer i360 has little historical data but boasts of having acquired a wide range of consumer profiles and having a team of data scientists developing predictive models. Looking for probable 2016 caucusgoers who think Islamic State is a greater concern than threats to civil liberties? Then i360 is your go-to.

Paul has vowed to bring new supporters into the Republican primary process, including young voters. If he succeeds, the intelligence his campaign assembles about these citizens—such as their cell phone numbers and the issues that are important to them—will become a unique asset. The campaign has been building its data trove through stunts such as Paul's 10-hour speech in protest of the USA Patriot Act and a video that shows the candidate feeding the tax code into a **wood chipper**. Those who watch this footage are directed to the campaign's website to sign up as supporters and share their e-mail addresses.

Control of the data Paul's campaign collects could make him a power broker in primaries for future Republican candidates and sustain a career as a perpetual candidate, whether inside or outside the Republican Party. His father, former Representative Ron Paul of Texas, sought the presidency twice as a Republican and once as the Libertarian Party's nominee. When asked to explain Rand Paul's reluctance to sign a data agreement with the RNC, spokesman Sergio Gor responded by e-mail, "We'll pass."

But Paul himself betrayed his thinking about his relationship with the party





Retrieving crab pots off the coast of Alaska

when he announced his candidacy in April. “Too often when Republicans have won, we have squandered our victory by becoming part of the Washington machine,” he said during a speech in Louisville. “That’s not who I am.” —*Sasha Issenberg*

**The bottom line** Republican candidate Rand Paul is amassing voter data that could help him stay politically relevant beyond 2016.

## Regulation

### Making the Seas Safer For Fishermen

- ▶ Implementation of a 2010 law that updates standards has lagged
- ▶ “The administration and Congress haven’t done their job”

Ed Mertz likes to fish, but these days he won’t stray too far from shore. “I’m still kind of chicken,” he says as he casts weighted troll lines in an inlet close to his home in Sitka, in southeastern Alaska. “I look at that forecast, and if it’s not good, it’s like, I don’t want to go.” In 1983, Mertz, now 62, was working on a six-man fishing vessel when it ran aground, flooded, and sank in Alaskan waters. He and two fellow fishermen scrambled onto some rocks, where they spent a bitterly cold night huddled together in survival suits. The bodies of the three others

were found the following day by a Coast Guard rescue helicopter.

Commercial fishing has for decades been among the most dangerous professions in America. The most recently available figures from the U.S. Bureau of Labor Statistics, from 2013, show fishermen were about 36 times more likely to die on the job than the average worker. Yet government efforts to address the safety problems have been slow. “The administration and Congress haven’t done their job,” says J.J. Bartlett, president of the Fishing Partnership, an advocacy group representing commercial fishermen. “It’s meant that fishermen are dying unnecessarily.”

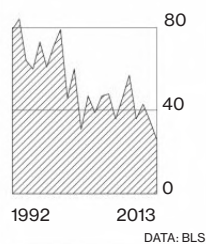
After Congress passed the 2010 Coast Guard Authorization Act, which updated fishing industry safety standards for the first time since 1988, activists like Bartlett were grateful their concerns were being taken seriously: Life rafts would be improved, safety training would become mandatory for fishing captains, and new boats would be built to standards set and verified by independent third parties called “class societies.”

But almost five years after the law’s passage, the Coast Guard has yet to translate many of its requirements into enforceable rules. “Trying to get those things into regulation is a long, arduous procedure,” says Jack Kemerer, whose job as chief of the Coast Guard’s Fishing Vessel Safety Division requires him to work with the often fractious industry to write and implement regulations.

After the previous round of legislative

changes, new rules were released within three years. Safety advocates say resistance from those in the industry concerned about the potential costs of new regulations is one reason for the delay this time around. Under pressure from vessel owners, the House passed legislation in May that would roll back some of the 2010 law’s requirements for safer boat building. The Senate has proposed similar legislation. “It’s a good idea to upgrade safety in our fleet, but

## Fishing Deaths



we need to make sure that it’s affordable,” says Glen Spain, Northwest regional director for the Pacific Coast Federation of Fishermen’s Associations, an umbrella group representing family-owned vessels.

One provision of the 2010 law that will take effect in October requires any boat operating beyond 3 miles from shore or carrying more than 15 crew members to undergo a dockside examination of safety equipment by Coast Guard personnel or approved representatives. But these audits can only enforce regulations that are more than two decades old, since new ones have yet to be issued. And they won’t address the seaworthiness of boats. “Most often, fishermen are dying because their vessel sank and they entered the water,” reported a Coast Guard-authored report, which ▶



# "It's really more about trying to have a conversation about making the place work"

Representative **Mark Meadows** (R-N.C.) on the resolution he introduced to dethrone John Boehner as House speaker



◀ counted 2,072 lost vessels and 1,055 fatalities from 1992 to 2010. "Few of the current regulations focus on vessel loss," the review concluded.

The 1988 legislation, modernizing statutes dating as far back as the 1940s, greatly reduced casualties. Alaska, where 1 in 11 workers is employed by the seafood industry, saw fatalities among commercial fishermen drop from 26 in 1993 to 2 by 2010. They've started to tick up again, though: The National Institute for Occupational Safety and Health counted eight deaths in the state last year, meaning that every six or seven weeks, on average, a fisherman failed to make it home to one of the small fishing communities along the coast.

Jerry Dzigan, who runs the Sitka-based Alaska Marine Safety Education Association, says lower fatality rates may mean there's less pressure on the Coast Guard to issue the regulations. A former fisherman himself, Dzigan says that to some extent commercial fishing has "been a victim of its own success." His nonprofit has played some part in that success by running workshops on emergency procedures and survival skills. On a recent morning a small open-sided trailer outside the association's offices doubled as an engine room in which students were rehearsing reactions to a flooding incident. Later that day, trainees were drilled on engine-fire responses. Fires and flooding accounted for more than half the fishing vessels lost at sea in the past two decades, Coast Guard statistics show.

The 2010 Coast Guard Authorization Act allocated \$6 million a year for training programs such as the one Dzigan runs, but Coast Guard managers have repeatedly failed to request that Congress appropriate the necessary funds. Asked why, the Coast Guard's Kemerer responded: "It's complicated.

You'd have to ask someone in Congress."

Representative Bill Keating, a Democrat whose Massachusetts district supplies America's most valuable fishing catch, has vowed to appropriate the funds in the next round of budget discussions, for 2017. Says Keating: "There's no excuse for this." —*Willem Marx*

**The bottom line** The Coast Guard has been slow to turn 2010 legislation into rules to improve safety for commercial fishermen.

## Government

### Congress Looks Underground for Cash

▶ Legislators propose tapping the government's stockpile of crude

▶ "The Strategic Petroleum Reserve is not an ATM"

In its quest to spend more without raising taxes, Congress has found a new piggy bank. It's buried deep underground, protected by armed guards, and filled with a valuable commodity worth billions of dollars. It's not a gold vault—it's the U.S. Strategic Petroleum Reserve, the country's emergency stockpile of crude oil. Created in 1975 after Arab oil producers cut off exports to the U.S., causing gasoline prices to spike, the SPR was designed to immunize the country against supply shocks. Today it stores about 695 million barrels of crude in salt caverns in Texas and Louisiana.

While it's supposed to buttress America's national security, the SPR has begun to look to Congress like a source of cash. In the past month, lawmakers have proposed a pair of bills

that call for the sale of 180 million barrels of oil, to raise almost \$15 billion. "Congress is starting to look at the SPR like it's free money," says Robert McNally, a former energy adviser to President George W. Bush who now runs the Rapidan Group, a consulting firm in Bethesda, Md. "And there's a race to see who can grab it first."

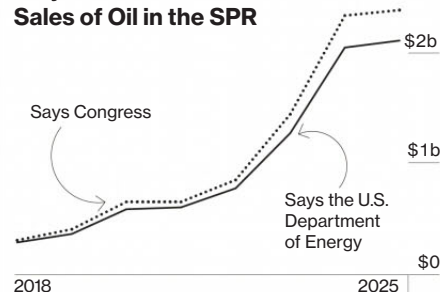
On July 10, the House passed a health-care bill that would speed drug development and boost funding for medical research, paid for in part by \$5.4 billion in expected SPR oil revenue. In the Senate, Majority Leader Mitch McConnell of Kentucky and Democrat Barbara Boxer of California have struck a rare bipartisan alliance with a bill that seeks to replenish the depleted U.S. Highway Trust Fund with \$47 billion over six years. About \$9 billion of that would come from selling 101 million barrels of SPR crude from 2018 to 2025.

Not every lawmaker thinks this is a good idea. On July 21, after the Senate highway bill was introduced, Alaska Republican Lisa Murkowski, who chairs the Senate Energy and Natural Resources Committee, tore into her colleagues in a speech on the Senate floor. "The Strategic Petroleum Reserve is not an ATM," she said. While Murkowski said she supports finding a long-term fix for the Highway Trust Fund, she said doing so by selling crude from the SPR is "akin to selling the insurance on your house in order to pave your driveway."

This wouldn't be the first time Congress has used oil to plug a spending gap. The U.S. sold 28 million barrels from the reserve in 1996 and 1997 to cut the federal budget deficit. The Department of Energy has also periodically released oil to avoid supply disruptions, as it did after Hurricane Katrina and during the 2011 Libyan revolution.

The fracking boom has pushed U.S.

### Projected Revenue From Sales of Oil in the SPR



DATA: CONGRESSIONAL BUDGET OFFICE, U.S. DEPARTMENT OF ENERGY

oil production to 9.7 million barrels a day, almost double what it was a decade ago. Imports have fallen and now make up less than half of all the petroleum the U.S. consumes. While increased energy independence may insulate the U.S. from supply shocks, it's also partly responsible for the recent plunge in prices. As of late July, a barrel of West Texas Intermediate was trading for less than \$50, down from \$100 last summer. In other words, this is hardly an ideal time for the government to sell oil, especially when the explicit purpose is to raise money. "It's a bad idea regardless of price," says Guy Caruso, a former administrator of the Energy Information Administration, which tracks and analyzes U.S. energy data. "It's made even worse by the timing."

According to the Congressional Budget Office, Congress expects to be able to sell oil for \$75 a barrel in 2018, and for as much as \$96 a barrel in 2025. While the EIA forecasts that oil prices will recover to about \$70 by 2018, the futures market isn't as optimistic. WTI scheduled for delivery in 2020 was priced at \$63 a barrel as of July 29.

The initial version of the highway bill laid out a schedule for the Energy Department that detailed the number of barrels to be sold each year. According to a Democratic Senate aide, this struck a lot of Capitol Hill staffers as foolish, since it locked the government into selling oil regardless of the price. On July 28, Oregon Democratic Senator Ron Wyden and Louisiana Republican Senator Bill Cassidy inserted an amendment that gives the government flexibility to decide when to sell and for how much. It also extends the period in which the government can sell the oil from 8 to 10 years.

Although neither bill is expected to wind up on President Obama's desk this year, analysts believe it's just a matter of time before lawmakers start tapping the reserve for funds. "This is only the beginning," says Rapidan's McNally. "It's a feeding frenzy. Blood is in the water, and the sharks are swimming." —*Matthew Philips, with Jim Snyder and Laura Litvan*

**The bottom line** A pair of bills in Congress would raise about \$15 billion from sales of oil held in the U.S. Strategic Petroleum Reserve.

California

# A Bill

By James Nash

## Smokey Says—No Drones

SB-167 Forest fires; interference; unmanned aircraft

The essentials

A Forestry Service illustration warns of the dangers of flying a drone near a wildfire

1. California lawmakers are getting serious about punishing people who fly drones around wildfires. On July 15, a state Senate committee advanced bipartisan legislation that would make interfering with firefighting or other emergency operations a misdemeanor punishable by up to 6 months in county jail and fines of as much as \$5,000. A second bill, introduced on July 21, would block people whose drones are shot down by firefighters from demanding compensation.
2. Firefighters had to suspend operations after drones flew into airspace being used by air tankers over a fire that jumped a heavily trafficked stretch of Interstate 15 between Los Angeles and Las Vegas on July 17, stranding drivers. "We're done with the educational part of it," says California Department of Forestry and Fire Protection spokesman Daniel Berlant. "We're really stepping up and working with our law enforcement partners to hold these people accountable."
3. It's already a misdemeanor under state law to impede firefighting or to disobey orders from firefighters and police during a wildfire. "The legislature needs to send a signal that our society simply won't put up with this nonsense," said Assemblyman Mike Gatto, one of the bill's co-authors. "Our emergency response personnel shouldn't be at risk."

Vital statistics

### Authors

Sen. Ted Gaines (R-EI Dorado)  
Assemblyman Mike Gatto  
(D-Glendale)

"To address the interference of unmanned aircraft with efforts to fight forest fires during the current fire season, it is necessary that this act take effect immediately"

### Section 1

Section 4167 is added to the Public Resources Code pp. 2-3

Section 2  
p. 3

Section 3  
p. 3







## The New Old Windows

► With a little help from its friends, Microsoft tries to win fans

► “Windows has moved from a lead role to a support role”

Over the past 20 years, releases of new Windows operating systems have been marked by midnight sales parties, junkets crammed with reporters, and Microsoft’s biggest marketing campaigns. The introduction of Windows 10 on July 29 was much quieter: no ringing the Nasdaq opening bell, no promos with sitcom stars or Rolling Stones songs—just 13 parties around the world to thank volunteers who’ve helped debug and refine the operating system during the past year. “Having a big launch with celebrities, it might be newsworthy, but it’s not necessarily the step to a billion happy and engaged Windows users,” says Windows chief Terry Myerson.

Microsoft has promised shareholders that Windows 10 will reach 1 billion users within three years—which would give it the fastest adoption rate ever—even as the company shifts its focus to other products. It’s relying in large part on the 5 million volunteer bug testers, known as Windows Insiders, not only to make Windows 10 better but also to build loyalty for the OS. It’s a humbling acknowledgment that as consumers shift from PCs to smartphones and tablets, the software synonymous with Microsoft isn’t the required tool it once was. In 2000, Windows ran on 97 percent of the world’s consumer computing devices including phones

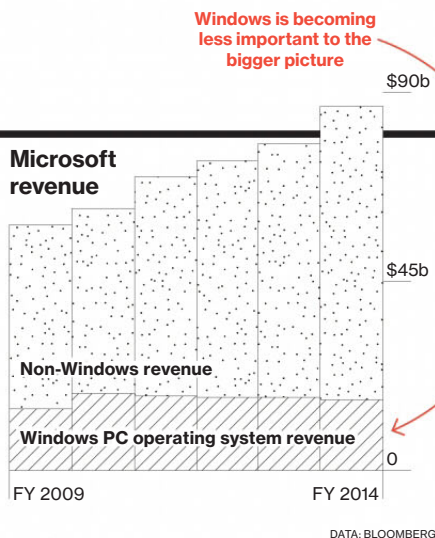
and tablets, Goldman Sachs estimates; today, the figure is under 20 percent.

Under Chief Executive Officer Satya Nadella, Microsoft has begun to recognize that the biggest competition for a new version of Windows is no longer the previous version of Windows. To better spread Microsoft’s influence beyond its own operating systems, the company has acquired several makers of iOS and Android business apps and introduced new versions of Office apps on iOS and Android first. The OS division’s marketing chief, Yusuf Mehdi, is talking about winning customers back from “other ecosystems,” such as those created by **Apple** and **Google**. To do that, Microsoft has tried to make Windows 10 as intuitive and inviting as possible.

Windows 8, released in 2012, annoyed users by making the PC into a tablet, eliminating familiar features like the Start Menu in favor of a touchscreen system based on taps and swipes that only a small percentage of PCs could take advantage of or accommodate at all. The new edition restores the Start Menu and lets users switch more easily between the touchscreen setup and a more traditional point-and-click interface. It’s a lot more natural than the Windows 8 setup, if not exactly revolutionary.

Microsoft has also replaced its decrepit Web browser, Internet Explorer, with a new one called Edge, which is missing some customization options at launch but otherwise compares favorably with Chrome and Safari. The company’s Siri-like virtual assistant, Cortana, is built in, so you can bark out, “Tell Tim I’m running late,” and the OS will send an e-mail. Say, “Add milk to the grocery list,” and, with the help of GPS, Cortana texts your phone a reminder to buy milk when you’re in the parking lot at Stop & Shop. For its first year on the market, Windows 10 is free for consumers who have an earlier version of the OS, and \$119 for those who don’t.

The biggest change was last September’s creation of the Windows Insider program, the group of consumers and business customers who agreed to download a series of early versions of the OS and try them out. Members sent feedback on each after using it for about 10 hours, shaping Windows 10 to a degree that would have been unimaginable for Microsoft a few



years ago. The new OS has received a “surprisingly positive response” from companies, says Steve Kleynhans, an analyst at researcher Gartner. Easing people into the new interface has helped assuage fears about the notorious bugginess of past Windows releases.

Microsoft could use a hit. On July 21 the company announced a record \$3.2 billion quarterly loss on \$22.2 billion in revenue, owing to an almost total write-off of the Nokia phone business it bought for \$9.5 billion in 2014. Microsoft is massively scaling back its in-house phone-making and cutting about 7,800 jobs. And while it’ll be time for holiday shopping before Dell and Hewlett-Packard have new PCs ready to take full advantage of Windows 10’s new features, the OS still brings in serious money. Chief Financial Officer Amy Hood said in April that it’s now worth about \$15 billion a year, down from about \$19 billion in 2013, the last time Microsoft disclosed its Windows division revenue. Ninety-two percent of the 300 million PCs sold around the world each year run Windows, Gartner estimates, down from 95 percent two years ago.

Following his earnings report, Nadella told analysts that while Windows 10 would restore the OS division’s revenue growth, its effects would mostly be felt at least two quarters from now. He appears more focused on the company’s future beyond Windows: In June he distributed a mission statement to employees that listed the OS third among the three priorities of his tenure, behind “productivity services” (including Microsoft Office) and cloud platforms. “Windows has moved from a lead role to a support role,” Gartner’s Kleynhans says.

The Windows team continues to

invest in research and development, including on projects beyond the PC, such as augmented-reality goggles that display holograms, and 84-inch touch-screen computers for a \$20,000 corporate conference room setup. Windows chief Myerson says he’s trying to make sure Microsoft’s OS will be “the best home” for Office and Skype, among other company products.

In part, he says, that means following the process of regular updates and improvements that began with Windows Insider, as opposed to rolling out a new version of Windows every few years. (Corporate users who don’t want to be bothered to regularly update their systems can opt out.) It’s possible there won’t ever be another update so big that it requires a kickoff party. “Let’s put it this way,” Myerson says. “There’s nobody working on Windows 11.”

—Dina Bass and Ashlee Vance

**The bottom line** With Windows 10, Microsoft is trying to turn around a two-year slide in OS revenue, from \$19 billion to \$15 billion.

## Software

### Salesforce Gets a Dose Of Oracle Discipline

► The cloud pioneer wants customers to stop buying piecemeal

► “The company needs to behave like a larger, more mature company”

More than a decade ago, **Salesforce.com** became the first powerhouse tech company built entirely around sales and customer service software that’s distributed, managed, and maintained online. Today it has annual revenue above \$5 billion and a market value of close to \$50 billion. But because it built its business selling to smaller companies, Salesforce is still a fraction of the size of rivals such as **Oracle** and **IBM**, which regularly nail down bigger deals. In February, founder and Chief Executive Officer Marc Benioff set a goal of \$10 billion in annual revenue, though he didn’t say when. That’s for Keith Block to worry about.

Block, Salesforce’s president and a

26-year veteran of Oracle, has spent the past two years trying to make the cloud company sell more like the hardware giants. He’s focused the sales team on securing multiyear megadeals with the likes of Coca-Cola and Barclays instead of pitching software in bits and pieces to businesses of any size. He’s asking software designers to build more products aimed at specific industries, and he’s developed a more rigid, aggressive sales strategy meant to answer any question a big client could have.

That strategy starts at the top, says Block. When he and Benioff pitch CEOs, “the discussions aren’t really around cloud,” he says. “They are around, ‘How can I change the way I do things with my customer?’ Every time we sell something, we’re solving a business problem.”

Block oversees a team he assembled to manage major accounts. That group includes staffers coding industry-specific software, the salespeople telling clients why they need it, and the customer service reps talking them through each click. The goal is to sell more stuff to Salesforce’s top 30 customers, who each pay the company about \$10 million a year, and get them to spend five times that, says Steve Koenig, an analyst with Wedbush Securities. Block says he’s tripled the number of deal closings by investing in Ignite, a program that offers customers free consulting services, but declined to comment on specific sales targets.

For salespeople, the biggest change under Block has been the “Do Step,” a set of do-this-then-that rules he created to guide them through the sales process. It’s a serious shift for a sales culture that had long been relatively easygoing, says Jim Steele, the company’s former head of worldwide sales, who now holds that position at competitor **InsideSales.com**. “What Keith brought that we frankly always struggled to get at Salesforce was a disciplined operational rigor that was unyielding, unforgiving,” he says.

In 2012, Block left Oracle when instant messages he sent a colleague insulting the quality of Oracle products and the behavior of his boss, Mark Hurd, became public as part of a **Hewlett-Packard** lawsuit against the company. Benioff hired



Block



# Success Is Our Business



"As a national trade show producer, we choose Las Vegas as often as we can. The energy is unmatched, which lays the foundation for a great event."

**DOUG MILLER**

President, Urban Expositions

**LAS Vegas**

VegasMeansBusiness.com

## Technology

◀ Block soon after, telling reporters at the time that the recruitment effort had taken 10 years. "I think the biggest mistake Mark Hurd ever made was letting Keith Block leave Oracle, because he's probably the best sales executive the enterprise software industry has ever seen," Benioff said.

Salesforce revenue has grown from \$4.1 billion to \$5.4 billion in Block's first two years there, and researcher Gartner estimates that the company's share of the market for customer relationship management software has risen from 14 percent to 18 percent. Deferred revenue has grown from \$2.5 billion to \$3.3 billion as the company signs longer-term contracts with larger companies. The average contract duration has risen and is now one to three years, the company says.

At the same time, Salesforce has been slow to adapt its software designs for the mobile era, Gartner says. Several competitors, including **Microsoft**, have been faster. Larry Augustin, the CEO of **SugarCRM**, a smaller competitor, says Block's all-or-nothing sales model de-emphasizes the quality of individual products. "It's not about each application being innovative in its space, it's about being able to provide a suite of apps from one vendor, really the Oracle pitch," he says. Salesforce says rivals can't match its products' versatility, and Block says he regularly gives demos using his iPhone 6.

Salesforce may also need to worry about turnover as longtime employees chafe against Block's changes, says Andy Price, a managing partner at executive recruitment firm Schweichler Price Mullarkey & Barry. Among others, Steele left in December, and four other senior Salesforce managers have joined him at InsideSales since March. But if Block is going to meet Benioff's goal, Price says, some new strictures,

and departures, are inevitable. "The company needs to behave like a larger, more mature company," he says. In some cases, "that's just not exciting to the people who've got it to this point."  
—*Jack Clark*

**The bottom line** Block is pushing Salesforce to focus on selling bigger software packages as he aims to double revenue.

## Video

### Networks Outsource Their Networking

▶ Streaming companies see brisk business from TV programmers

▶ "It's moving at a pace that's difficult to keep up with"

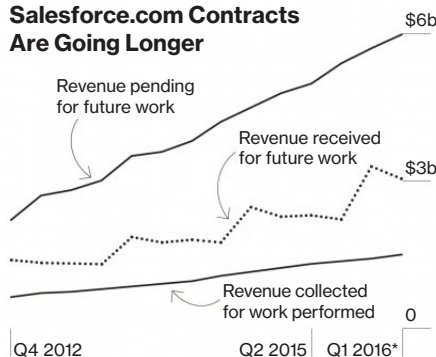
From **HBO** and **AMC** to **ESPN** and the **Tennis Channel**, TV networks have relied for decades on cable and satellite providers to distribute their programming. In the era of streaming video, they're trying to deliver shows and movies directly to viewers online, yielding a host of challenges more complex than negotiating fees with the likes of **Comcast** and **DirecTV**, says Paul Rehrig, senior vice president for business development at AMC.

"It's hard, it's complicated, and it's moving at a pace that's difficult to keep up with," says Rehrig, who's spent much of the past year overseeing the development of Shudder, a standalone streaming service aimed at horror-movie fans. "You need people who are first and foremost technologists with software engineering backgrounds." AMC, like many networks, looked outside for help.

To build Shudder, Rehrig hired **DramaFever**, one of more than two dozen businesses working behind the scenes to set up dedicated online homes for old-school media companies. Some of the new online destinations make their money from ads; others, from subscriptions, like the small packages of streaming TV channels out or coming by yearend from Comcast, **Verizon**, **Dish Network**, **Apple**, and **Sony**. Outsourced streaming-platform development has become a \$527 million business, researcher SNL Kagan estimates.

Several of the contractors stream programming themselves. About 7 million people watch DramaFever's collection ▶

### Salesforce.com Contracts Are Going Longer



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◀ of subtitled Korean soap operas each month, and Major League Baseball's technology division built streaming services for HBO and ESPN. "If you're trying to go to market quickly, you're looking for a product that's on the shelf and that you know can handle 3 to 5 million concurrent streams on a Sunday night," says Bernadette Aulestia, HBO's executive vice president for global distribution. HBO learned that lesson last year, when the streaming service it had built was overwhelmed during the season premiere of *Game of Thrones*.

Streaming TV over the Internet requires writing separate code for iPhones, Xboxes, Roku, and a bevy of other devices. It's tough to sort out from scratch, says Chris Wagner, executive vice president at streaming contractor **NeuLion**. "If you have a transportation problem, do you buy a car or build a car?" says Wagner, whose company helped **Univision** stream the World Cup to 74 million people last year and set up a video network for the Tennis Channel in eight weeks. "We build a platform that gets you there faster and with less cost."

DramaFever was a natural partner for AMC, which had been an investor before Japanese telecom giant **SoftBank** bought the streaming company for \$100 million in October. Earlier last year, DramaFever helped AMC build Doc Club, a subscription service focused on documentaries. The company wouldn't say how many people pay the yearly \$60 subscription fee. Shudder, the horror service, began operating in open beta on July 15 and charges viewers \$50 a year. It has a solid selection of classic and newer horror movies, but for now users have to rely on category headings like Romantic Bloodsuckers to find the movies, because

the interface lacks a search engine.

A few networks have kept their streaming-service development in-house, most notably **CBS**, which charges \$6 a month for its All Access service. "We certainly didn't want to pay another firm to outsource something we already know how to do," says Marc DeBevoise, executive vice president at CBS Interactive. He says building the service took more than a dozen engineers about nine months of work.

DramaFever took a year to produce Shudder, but AMC would have needed at least six months just to hire programmers, Rehrig says. Eventually, though, he wants his own people handling things, he says: "I don't think you can outsource forever." —Gerry Smith

**The bottom line** The outsourcing of streaming-service development has become a business worth \$527 million a year.

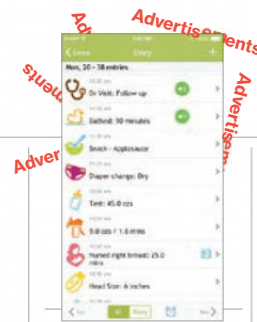
## Mobile

### Apps Are Running Ads You Can't See

▶ Thousands of programs cheat advertisers and slow phones

▶ "Freezes, restarts, and crashes became more frequent"

Most mobile apps that sell advertising charge based on the number of views the ads get, but not all app makers count honestly. Thousands of apps inflate their viewer numbers by running multiple ads at once on a given phone, most concealed in a background layer users never see, according to a study published on July 23 by Forensiq, a company



**The Baby Nursing/Breastfeeding app was among the 5,000 Forensiq identified**

that tracks fraud in online advertising. For phone users, that can mean their apps crash more frequently or their devices constantly run slower. Advertisers, meanwhile, are paying for views they don't really get.

Following its 10-day study, Forensiq concluded that more than 12 million phones around the world have been used to rack up phony ad views. About 1 percent of those it monitored in the U.S., and 2 percent to 3 percent in Europe and Asia, ran at least one app with hidden ads. Forensiq identified 5,000-plus apps that run unseen ads on both iOS and Android phones. Advertisers pay more than \$850 million a year for concealed ads, the report says, and some of the apps can burn through 2 gigabytes of data a day on a device.

That intense data-gulping helped expose the scams. Forensiq noticed that some apps were calling up so many ads that people couldn't possibly be looking at them—running five background ads for each visible one or scrolling through ads while the app was closed. Many of the culprits are simple games or utilities with real users, says David Sendroff, Forensiq's founder and chief executive officer. "It's not Angry Birds or Candy Crush, but these are apps that people play and enjoy, and [that] some real effort went into developing," he says.

Among the apps whose names Sendroff shared with *Bloomberg Businessweek* was a breast-feeding app made by *American Baby* magazine and developer **Sevenlogics**. The invisible ads include spots for Olive Garden, Amazon.com, and IBM, he says. One review on the iOS app store, posted by someone with the handle Annoyed and Frustrated Mommy, called the *American Baby* app a "lifesaver" but said that "after a few months the freezes, restarts, and crashes became more frequent and persistent. I also noticed the pop-up ads became more tricky to avoid accidentally clicking on, and now I swear my phone takes me straight to the App Store when I haven't even touched the screen after the pop-up appears. Unfortunately it's too late for me to switch apps, because all my info is wrapped up in this one."

It's not always clear who put the deceptive code in a given app. Alex

## Digits

4

Earlier in the month, Reddit lost its CEO, engineering chief, and communications director

The most recent departure was Jessica Moreno, the head of community. In a July 27 statement she said she plans to spend time with her family and is working with the company on a transition plan

The number of women who left senior management positions at **Reddit** in July. In recent weeks, the online forum has faced user revolt while trying to define and police offensive content.

# Innovation

## LauncherOne

### Form and function

Fired from a jet plane, the LauncherOne rocket lifts satellites weighing as much as 500 pounds into orbit for about \$10 million per launch, much less than the \$50 million to \$60 million most of its competitors charge.

### Innovator Richard Branson

**Age** 65

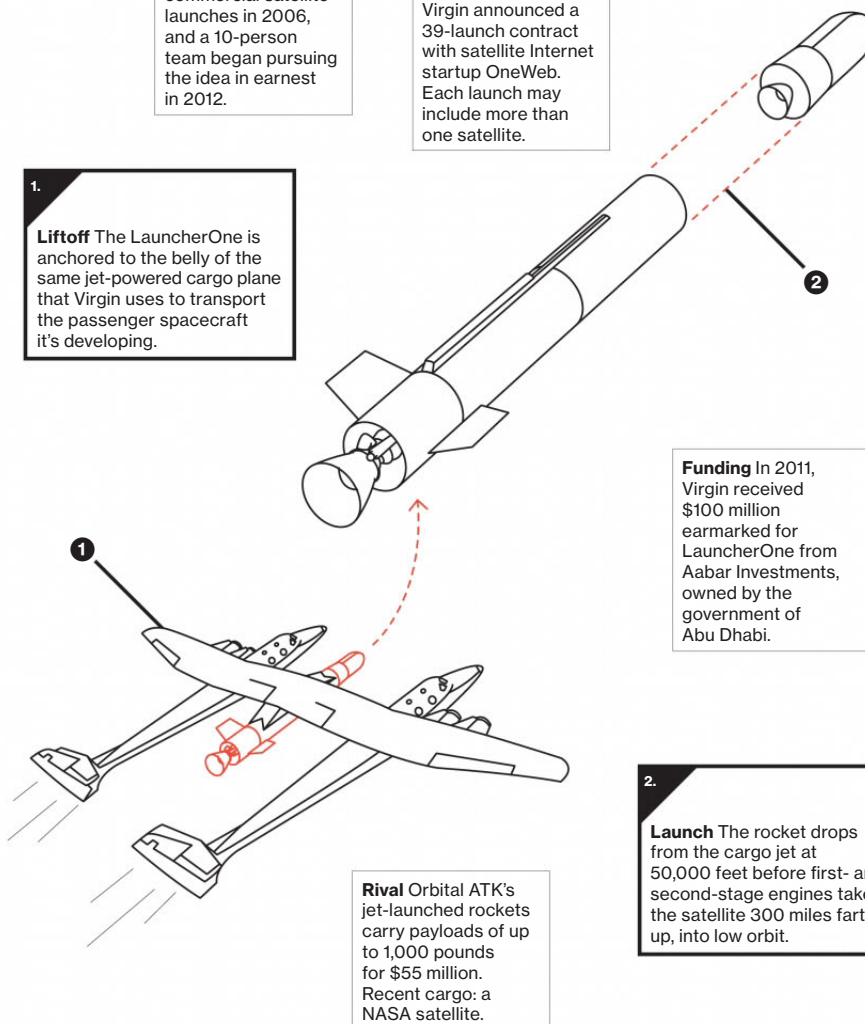
Founder of Virgin Group and its spaceflight subsidiary, Virgin Galactic



**Origin** Branson says he conceived of a cheaper, more flexible service for commercial satellite launches in 2006, and a 10-person team began pursuing the idea in earnest in 2012.

**Customers** In June, Virgin announced a 39-launch contract with satellite Internet startup OneWeb. Each launch may include more than one satellite.

**1. Liftoff** The LauncherOne is anchored to the belly of the same jet-powered cargo plane that Virgin uses to transport the passenger spacecraft it's developing.



**Funding** In 2011, Virgin received \$100 million earmarked for LauncherOne from Aabar Investments, owned by the government of Abu Dhabi.

**2. Launch** The rocket drops from the cargo jet at 50,000 feet before first- and second-stage engines take the satellite 300 miles farther up, into low orbit.

**Rival** Orbital ATK's jet-launched rockets carry payloads of up to 1,000 pounds for \$55 million. Recent cargo: a NASA satellite.

### Next Steps

University of California at Los Angeles physics professor Vassilis Angelopoulos says LauncherOne will make his satellite-based research a lot more affordable. "At a price of less than \$10 million, that's really awesome," he says. Virgin Galactic is ground-testing LauncherOne before the first monthly flights, expected next year. Vice President for Special Projects William Pomerantz says his team is close to finalizing launch contracts in addition to OneWeb's. —Michael Belfiore

Cheng, the president of Sevenlogics, says the company hasn't added any code that would run invisible ads, though it works with ad-tech companies that regularly update their code. "We are monitoring very closely with our ad vendors to prevent any intrusive advertisements," he says. **Meredith**, the publisher of *American Baby*, declined to comment.

Complaints about crashing and slowness are also common on reviews for a series of silly Android games with names such as Waxing Eyebrows, Celebrity Baby, and Vampire Doctor, all published by developer **Girls Games Only**. In a video published with its study, Forensiq shows the games running code that produces a steady stream of unseen ads for companies including Microsoft, Coca-Cola, and Mercedes-Benz. The performance issues are almost certainly caused by the background ads, Forensiq says. Google's app store suspended downloads of the Girls Games Only apps the day the study came out. The app maker didn't respond to a request for comment, nor did the advertisers.

Surreptitiously running ads is a violation of the rules governing all apps available in **Apple** and **Google's** app stores, but such trickery can be tough to detect. The best way, Sendroff says, would be to monitor each app's bandwidth use over time, and Google and Apple may not be able to do that. Apple declined to comment, and Google didn't respond to a request for comment.

The main limit on hidden-ad fraud may be that it doesn't pay as well as other online scams, says Michael Bentley, head of research and response at mobile security firm Lookout. Average ad rates for the apps in the Forensiq report hovered around \$1 per thousand views. That said, hiding ads carries relatively low risk of punishment. Online ad buys are often traded through several layers of automated middlemen before an advertiser's spots appear in front of consumers, and it can be hard to keep track of where the ads end up and which agency has placed them. If the victims of a crime are unaware it's happening, there's probably less of a chance of anyone getting caught.

—Joshua Brustein

**The bottom line** Forensiq estimates that invisible-ad fraud within apps slows phones and costs advertisers about \$850 million a year.





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# When Cars Don't Have Drivers, Who Needs Insurance?

► Insurers brace for a time when automation reduces accidents—and premiums

► “You have to be prepared to see that part of your business shrink, probably considerably”

A black Volkswagen Golf rolls along at 12 mph on an empty road in the heart of Virginia's horse country. Suddenly the dashboard lights up, and there's a warning sound. The driver ignores it. A moment later, the VW brakes hard—all on its own—and comes to a stop a foot in front of an inflated box painted to look like the rear end of a car. The Insurance Institute for Highway Safety (IIHS) has been running tests like this a few times a month at its research center in Ruckersville, Va. The objective is to vet automakers' latest crash avoidance technologies, like the one in the Golf, to identify the most effective ones.

The auto insurance industry is having its Napster moment. Like record companies at the dawn of online music file sharing, **Allstate**, **Geico**, **State Farm**, and others are grappling with innovations that could put a huge dent in their revenue. As carmakers automate more aspects of driving, accidents will likely plunge and car owners will need less coverage. Premiums consumers pay could drop as much as 60 percent in 15 years as self-driving cars hit the roads, says Donald Light, head of the North America property and casualty practice for Celent, a research firm. His message for insurers: “You have to be prepared to see that part of your business shrink, probably considerably.”

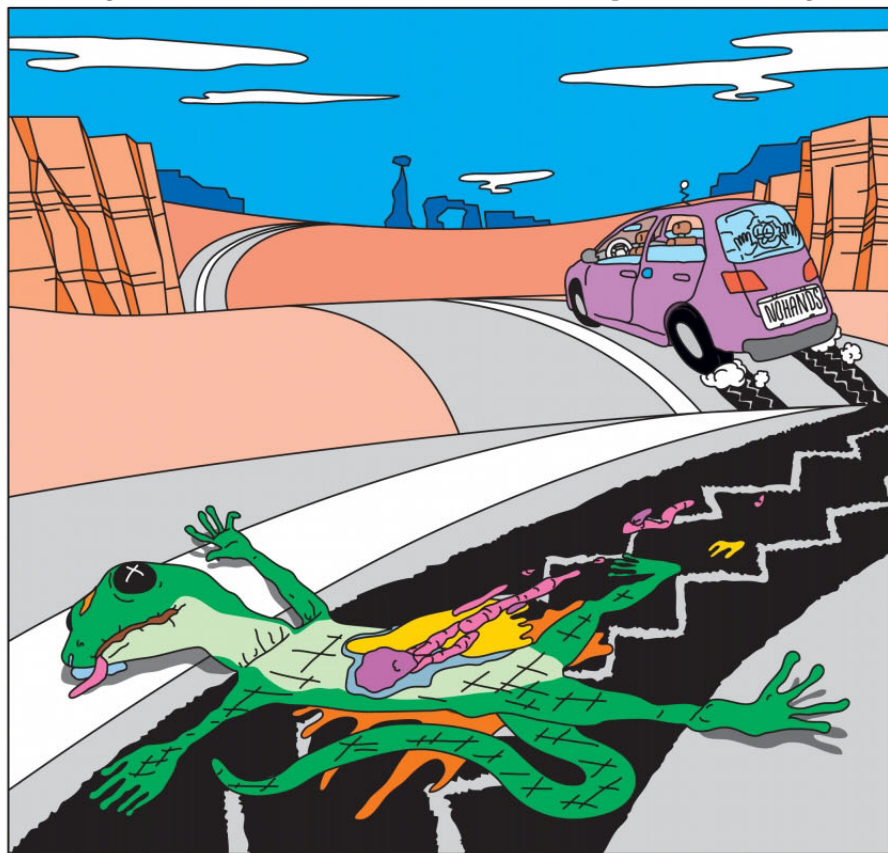
Auto insurance has long been a lucrative business. The industry collected about \$195 billion in premiums last year from U.S. drivers. New customers are the source of so much profit that Geico alone spends more than \$1 billion a year on ads to pitch its policies with a talking lizard and other characters. Yet even Warren Buffett, whose company,

Berkshire Hathaway, owns Geico, is talking about the long-term risks to the business model. “If you could come up with anything involved in driving that cut accidents by 30 percent, 40 percent, 50 percent, that would be wonderful,” he said at a conference in March. “But we would not be holding a party at our insurance company.”

Cars have been getting safer for years, thanks partly to the insurance industry's efforts to make anti-lock brakes, airbags, and other life-saving features standard issue.

Still, much bigger advances are at hand. Automakers have poured billions of dollars into developing sensors, cameras, and computers that can react to all kinds of driving situations.

For example, a system introduced on the 2013 Honda Accord beeps when cars get too close to traffic ahead or leave their lane without signaling. It has had a measurable effect on the frequency of some types of claims: Bodily injury liability losses dropped 40 percent and medical payments decreased 27 percent, according to a ►



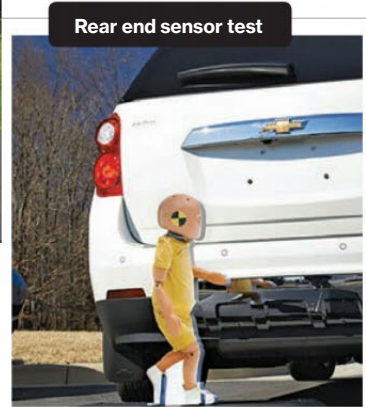


## Computers At the Wheel



Front end sensor test

An inflatable car and a foam cutout of a child are used in tests of auto safety features



Rear end sensor test

◀ 2014 study of insurance claims data by the Highway Loss Data Institute, IIHS's sister organization.

BMW is rolling out a car that can park itself. Cadillac has a model coming that drives hands-free on the highway. Google has logged more than a million miles in California and Texas testing its fully autonomous cars. Boston Consulting Group estimates that self-driving cars may account for a quarter of global auto sales by 2035.

IIHS is investing \$30 million to upgrade the facility in Ruckersville so researchers can run more tests on crash avoidance systems. A covered track that's part of the expansion is scheduled to open in September. The group is also designing controllers to perform maneuvers that would be hard for human drivers to do consistently. "We need robots to test the robots," says David Zuby, IIHS's chief research officer. Despite the advances in automation, he cautions that adoption may be slower than people imagine. "We're not going to wake up five years from now and have all the cars on the road be replaced by Google cars," he says.

The industry is bracing for upheaval. Allstate Chief Executive Officer Tom Wilson's futuristic worst-case scenario for the business—he calls it *The Jetsons*—has automation cutting the costs of accidents dramatically. The number of vehicles on roads drops, too, because people sign up for car sharing or other transportation services instead of owning their own set of wheels. Auto insurance premiums plateau for a decade, then decline

precipitously. "There will be fewer cars. There will be fewer accidents. And it will be safer," he says. "When you're as big as we are and insure 16 million households, it doesn't take much of a degradation to be a real revenue issue for you. So we are focused on it."

About six months ago, Allstate started a group to study what it calls the "connected car." Wilson, who has ridden in a Google self-driving vehicle twice, is also thinking about new sources of revenue. He's considered selling coverage for other kinds of products, such as mobile phones. Another idea: Make money off the troves of data the insurer collects on its customers. Allstate already offers a device that tracks driving behavior so policyholders can earn rewards for safe practices. Wilson wonders: Why not use that information to offer customers a coupon when they drive past a restaurant?

Other insurers are vaguer about their plans. **Liberty Mutual** says it's "actively in discussions" about how to help its customers benefit from the technologies. **Cincinnati Financial**, **Mercury General**, **Progressive**, and **Travelers** have all noted in regulatory filings this year that self-driving cars could hurt their businesses. During investor presentations, some have said they'll rely on homeowners' policies and other types of coverage should the auto premiums shrink.

One opportunity for the industry could be selling more coverage to car-makers and other companies developing the automated features for cars. While the new systems could reduce accidents significantly, they won't be perfect. Even Google's self-driving cars have been in a handful of minor accidents. When the technology fails, manufacturers could get stuck with big

liabilities that they will want to cover by buying more insurance. There's also a potential for cars to get hacked as they become more networked. Fiat Chrysler recalled 1.4 million vehicles in July after security researchers demonstrated to *Wired* magazine that they could remotely take control of a Jeep driving down the highway. That could lead manufacturers to buy cybercoverage, says Meyer Shields, an analyst at Keefe, Bruyette & Woods. Still, he says even the most innovative insurers will struggle to replace as much revenue as they lose. He asks, "How many railroads turned into airlines when air travel came along?" —Noah Buhayar and Peter Robison, with Elizabeth Dexheimer

**The bottom line** Insurers collected \$195 billion in auto premiums from U.S. drivers last year. By 2030, consumers could pay 60 percent less.

## Crime

### Trying to Close In on the JPMorgan Hackers

- ▶ Prosecutors charge men who may be connected to the attack
- ▶ The goal: Establishing a link to Russia's cyber underground

Authorities investigating last year's hacking attack on **JPMorgan Chase** brought charges in Manhattan federal court against five people on July 21 and arrested four of them. Yet the charges leave an important question unanswered: Who did the hacking?

Computer thieves took customer names, addresses, phone numbers, and e-mail addresses in the attack, which JPMorgan said affected 76 million

# 1.4m

Number of vehicles Fiat Chrysler recalled in July because of vulnerability to hacking

households and 7 million small businesses. The complaints filed against the five men don't mention computer crime; they focus on alleged stock manipulation and a Bitcoin scam uncovered in the course of the hacking investigation. But investigators hope that the prospect of prison terms will encourage some of the men in custody to provide information that will crack the hacking case, according to three people familiar with the strategy who asked not to be identified because the probe is in progress.

The men named in the complaint include Gery Shalon and Ziv Orenstein, Israeli citizens arrested in Israel, and Joshua Samuel Aaron, a U.S. citizen living in Israel who's still at large. Aaron signed in to some servers used in the JPMorgan attack, according to an FBI memo obtained by Bloomberg and the people familiar with the probe. According to the complaint, the men artificially inflated the price of at least five stocks in 2011 and 2012. They engineered a pump-and-dump scheme in which promotional e-mails were sent to victims, encouraging them to buy certain stocks, according to a parallel complaint filed by the U.S. Securities and Exchange Commission. After the stock price rose, the men secretly sold their own holdings, the SEC complaint says, earning at least \$2.8 million in illegal profits.

Also charged in a separate complaint was Anthony Murgio of West Palm Beach, Fla. Prosecutors say he created a Bitcoin exchange business in 2013 that laundered at least \$1.8 million for customers, including ransom payments made to hackers who lock users out of their own computer systems and demand money for restoring access. Prosecutors allege that Murgio operated the exchange with a co-conspirator, Yuri Lebedev, who was also arrested and charged.

Lawyers for Shalon and Orenstein say their clients deny any link to the events described in the complaints. Murgio's attorneys did not comment. Attempts to reach Lebedev's attorney were unsuccessful. It couldn't be determined if Aaron has an attorney. A spokeswoman for JPMorgan declined to comment.

Prosecutors need the men's help

**The men charged with fraud don't have the skills required for the raid on the bank's computers**

because of significant weaknesses in their hacking case, the people familiar with the investigation say. According to the FBI memo, agents early on had evidence pointing to Aaron and his longtime friend Murgio. The FBI agents wanted to bring charges, but prosecutors found the evidence to be circumstantial and not strong enough to meet the threshold for charging the men in connection with the Wall Street hacks.

The agents kept digging. While they discovered only circumstantial links to the hack, they found evidence that some of the men may have been involved in a range of potentially criminal schemes. Investigators used that evidence to bring the fraud charges. It's a common tactic of prosecutors working complex cases to charge suspects with some crimes that are easier to prove. The investigators' immediate goal is to unearth more evidence from those arrested. They could then fortify their existing case by adding charges that link one or more of those arrested with the JPMorgan hack, which investigators now believe is connected to attacks on **E\*Trade Financial**, **Fidelity Investments**, and other financial institutions.

There's another potential quarry. Investigators have concluded that the men charged don't have the kind of computer skills needed for the JPMorgan attack. They suspect the actual keyboard work was done by an elite group of Russian cybercriminals who may have formed a partnership with the alleged stock fraudsters. The theory is that the fraudsters wanted customer e-mails to use in stock promotion schemes.

Both Murgio and Aaron traveled frequently to Russia, and one of the people familiar with the investigation says there were links between the suspects and members of Russia's cyber underground. The FBI is eager to interrogate anyone who could provide firsthand evidence against this type of cybercriminal, long untouchable by U.S. law enforcement.

The arrest phase of the investigation didn't go exactly as planned, according to the people close to the case. Aaron, who lives in Tel Aviv, is the connection between many of those charged and served as the intermediary between Shalon and unnamed conspirators in the U.S. who picked company stocks to manipulate, according to allegations in the court papers and people familiar with the case. Authorities had hoped to arrest him at his home, but he wasn't

there. Officials won't say if they know where he is. According to a social media post by his wife, they were in St. Petersburg, Russia, as recently as July 19. In Russia, Aaron would be outside the reach of U.S. authorities.

—Michael Riley and Jordan Robertson

**The bottom line** Investigators hope men arrested on fraud charges can provide clues to last year's hack of JPMorgan's computers.

## Pharma

### For European Biotechs, Patience Starts to Pay

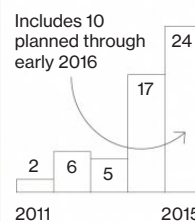
► Investors are more willing to spurn buyouts and wait for a blockbuster

► The window for IPOs "finally opened about a half year ago"

As **GW Pharmaceuticals** headed toward final-stage testing of a cannabis-based treatment for epilepsy last year, the British company faced the inevitable question: Should it remain independent or team up with a larger player to develop and market the product? Chief Executive Officer Justin Gover

chose to go it alone. Since January 2014, GW has raised \$415 million in a series of offerings on Nasdaq, enough capital to finish developing the drug and sell it with an in-house team. The stock has almost tripled since

#### European Biotech IPOs



then, giving the company a market value of \$2.5 billion. The decision was "a statement of ambition," Gover says. "Our investors actively encouraged us to ensure that we would be able to deliver on that ambition for the company as an independent one."

Venture capitalists and other early backers of European biotech startups, chastened by losses decades ago at companies such as British Biotech, have long preferred to cash out via takeover offers from industry giants. Lately they've been more willing to wait for blockbuster drugs that might supercharge profits. "Gone are the days when you provide a small amount of capital to take a business from



◀ A to B purely with the objective of selling it,” says Russ Cummings, CEO of **Imperial Innovations**, a biotech incubator in London.

To raise money while staying independent, the biotechs are listing their shares. As many as 10 initial public offerings by European biotech companies are expected by early 2016, according to RBC Capital Markets. That would bring the total to about 40 in two years, up from

**“Gone are the days when you provide a small amount of capital to take a business from A to B purely with the objective of selling it.”**  
—Russ Cummings

just 11 in 2012 and 2013, according to data compiled by Bloomberg. “For a long time, the window in Europe has been completely shut for biotech IPOs,” says Onno van de Stolpe, CEO of **Galápagos**, a Belgian developer of an arthritis treatment that in

May raised \$317 million on Nasdaq. “It finally opened about a half year ago.”

With biotech stocks surging—the Nasdaq Biotechnology Index has almost tripled since 2013, beating the Standard & Poor’s 500-index’s 50 percent gain—European investors see a greater chance of a payout. And they can’t help but notice the success of American companies such as **Amgen**, **Celgene**, and **Gilead Sciences**, which have gone from startups to market values exceeding \$100 billion since the 1980s.

Like GW Pharma, **DBV Technologies** of France has spurned suitors interested in a product it’s almost ready to launch: a skin patch to treat peanut allergies. Its shares have jumped 77 percent this year. “Europe is at a stage where you’re starting to see a midcap universe emerging,” says Paul Tomasic, head of European health-care investment banking at RBC Capital in London. Tomasic worked on listings in June by **Abivax**, a French maker of a drug aimed at treating hepatitis B, and **Biotie Therapies**, a Finnish company that’s working on a treatment for Parkinson’s disease. IPOs on the way include Paris-based **GenSight Biologics**, a developer of gene therapies for eye diseases, and Vienna’s **Nabriva Therapeutics**, which is testing new antibiotics.

While several European companies have listings in the U.S., the trend now is toward selling shares locally, Tomasic says. That’s because U.S. underwriters charge 7 percent of gross proceeds raised, about double the fee in Europe, says Graham Defries, a partner at London law firm Dechert who advises health-care companies.

American regulators are also tougher, requiring more detailed financial statements than in Europe, and there’s a greater risk of class action lawsuits in the U.S., Defries says.

Europe has a growing corps of biotech cheerleaders such as fund manager Neil Woodford’s **Patient Capital Trust** in London and **Malin**, a startup incubator in Dublin. But the region has fewer financial backers with the depth of knowledge of U.S. investors, many of whom have Ph.D.s in science and fully understand the risks and rewards of biotech, says Catherine Moukheibir, head of finance at France’s **Innate Pharma**. “The U.S. market isn’t replaceable as the primary source of funds,” says Moukheibir, whose company is developing cancer drugs. About 40 percent of investors in Innate’s Paris listing are in the U.S., she says. Buyouts aren’t entirely off the table, either. There have been 15 acquisitions of European health-care companies announced this year, according to data compiled by Bloomberg, vs. 23 in 2014.

Still, European biotech companies have a chance to grow as big as their U.S. peers if they continue to get the kind of investor support that’s now emerging, says Geoffrey Hsu, a portfolio manager at OrbiMed Advisors in New York. “Drug development is a very long process,” he says. “Having that capital base to draw from on a regular basis is key to survival and success.”

—Makiko Kitamura

**The bottom line** After decades of buyouts by industry giants, as many as 10 European biotechs may go public by early next year.

## Wealth

### Teaching Heirs to Be Smart About Art

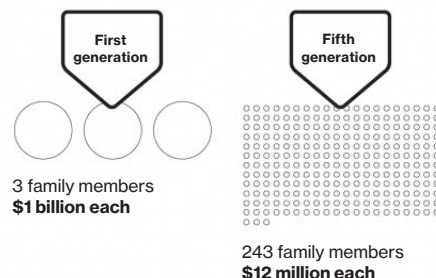
▶ Citigroup holds classes to court the young and rich

▶ Banks “don’t have the birthright to the next generation’s wealth”

One evening in June at a **Citigroup** office in downtown Manhattan, a group of twentysomethings spent \$95,000 in a bidding war for a black-and-white photo **tapestry** of Kate Moss by Chuck Close. They were confident that the work was

## Spreading the Wealth

A \$3 billion fortune dispersed over four generations could provide small fortunes to more than 200 heirs.



DATA: UBS; PWC BILLIONAIRES 2015 REPORT

worth the price. That’s why there was a collective gasp when Tash Perrin, a senior vice president at Christie’s, revealed that the work failed to reach its



reserve price and didn’t sell when it was last offered at auction in 2013.

The sale and the money that the 40 participants used to bid with were fake, but the lesson on the challenges of valuing and buying art was real. The attendees, from

wealthy families in 18 countries, are poised to inherit enough money in coming years to purchase some of the items used in the presentation and mock auction—from Cartier earrings worn by Elizabeth Taylor to a cover photograph for a Bjork album.

For wealth managers such as Citi Private Bank, teaching young heirs how to invest in art is one tool to help retain them as clients when they receive their inheritances. Banks “don’t have the birthright to the next generation’s wealth,” says Money Kanagasabapathy, global head, next generation at Citi Private Bank, who directs such events for clients’ children. “We want to continue to have the relationship with the family.”

Wealth managers haven’t been so successful at keeping younger clients. On average, they have seen almost half of the assets leave when a family’s wealth is handed to the next generation, according to the latest figures from a report on global private banking by consulting firm PricewaterhouseCoopers.

An estimated \$36 trillion is expected to be transferred to heirs in U.S. households alone from 2007 to 2061, according to a 2014 study by the Center on Wealth and Philanthropy at Boston College. The figure swells when it includes billionaires worldwide, most of whom are over 60 and have more than one child.

Other banks, including **Credit Suisse**, **Deutsche Bank**, **UBS**, and **Coutts**, a unit of Royal Bank of Scotland, run training camps for clients' children. Held in places including Singapore and Switzerland, the programs can span several days or more than a week. Participants often fly in from around the world.

**Abbot Downing**, a wealth management arm of Wells Fargo, and **U.S. Trust**, a unit of Bank of America, have financial education curricula with individual coaching instead of boot camps. Some parents or grandparents require heirs to take it before telling them how wealthy they are and what they'll inherit, says Chris Heilmann, U.S. Trust's chief fiduciary executive. In June the bank added a program for teens as young as 13.

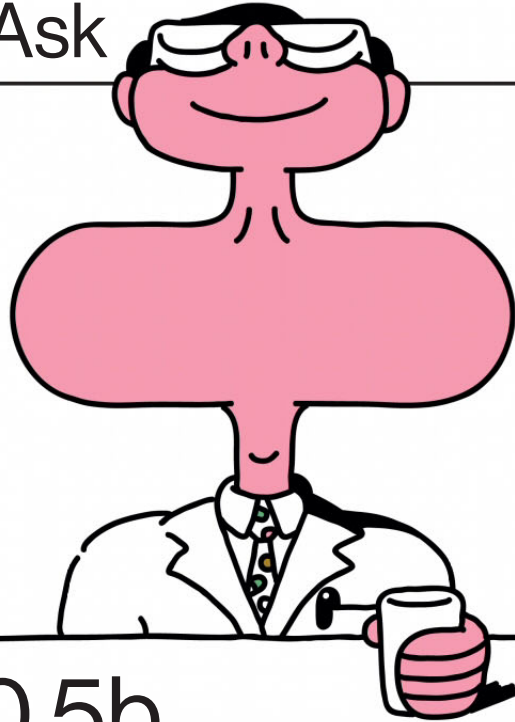
During the Citi Private Bank event, experts from Christie's helped participants review a mock catalog of about a dozen works. They advised each team on criteria to determine value: a work's quality, rarity, condition, and history of ownership. Attendees bid on pieces including an Andy Warhol Polaroid print of Giorgio Armani and a pair of ear clips by Seaman Schepps formerly owned by the Duchess of Windsor. Perrin then showed the teams what the works really sold for so they could see if they'd spent wisely.

The young adults who attended Citigroup's event have jobs, and some have master's degrees, but their parents want them to hone skills that are unique to their wealth—such as bidding on a Picasso or taking over a family business, says Kanagasabapathy. Wealth managers such as Citigroup hope the training sessions will strengthen both family profits and bank loyalty. As Kanagasabapathy says, "It's easier to retain a client than to get a new one." —*Margaret Collins and Rebecca Spalding*

**The bottom line** Banks are wooing children of the wealthy, who stand to inherit \$36 trillion in the U.S. from 2007 to 2061.

## Bid/Ask

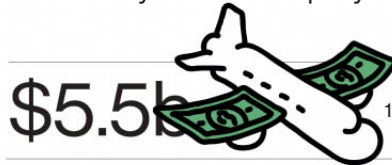
By Kate Rooney



# \$40.5b

### Teva Pharmaceutical swallows Allergan's generic drug unit.

The deal bolsters the Israeli company's position as the world's largest generic drugmaker. Teva, which had agreed to just a single purchase of more than \$1 billion since 2011, also ended its hostile pursuit of Mylan. Allergan, maker of the wrinkle treatment Botox, had just announced that it would buy biotech company Naurex for \$560 million.



# \$5.5b

**Solvay acquires Cytec.** The deal makes the 152-year-old company the world's second-largest producer of aerospace composite materials.

# \$5.1b

**Honeywell brings on gas, electric, and water meters.** Adding measuring company Elster is another step toward the company's goal of \$10 billion in takeovers by 2019.

# \$5b

**Meiji Yasuda Life Insurance extends its reach.** Buying U.S.-based insurer StanCorp Financial will cut the Japanese company's reliance on a slow domestic market.

# \$4.1b

**HeidelbergCement mixes in a rival.** The acquisition of Italcementi expands the world's second-biggest cement maker's operations in Italy, Egypt, France, and Belgium.

# \$2.7b

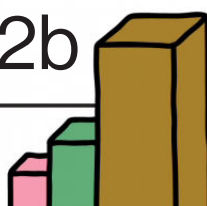
**Hikma Pharmaceuticals adds a generic business.** The purchase of Roxane Laboratories makes Hikma the sixth-largest supplier of copycat medicines in the U.S.

# \$2.2b

**China Minsheng Investment gets Sirius.** Bermuda-based White Mountains Insurance is selling its property and casualty reinsurer to the Chinese private equity firm.

# \$2.2b

**McGraw Hill Financial buys SNL Financial.** The owner of Standard & Poor's Ratings Services adds content on the banking and insurance industries.



# 5.1B



# Company Pride

Through targeted client offerings, employee programs and special events, Morgan Stanley works to support the LGBT community

When the U.S. Supreme Court recently ruled in favor of marriage equality, upholding the right for same-sex couples to marry in every state, employees at countless companies celebrated the landmark decision. But the professionals at Morgan Stanley are able to say that their employer not only supports the ruling, but has long demonstrated its support for marriage equality; in 2013, the firm was the only one of its peers in the financial services industry to sign both of the amicus briefs presented before the Supreme Court in support of marriage equality.

What was once considered solely a civil rights issue has, rightfully, become a corporate concern. “Large companies using their platform and their wide reach to support the LGBT community have been instrumental in us getting to where we are today,” says Sarah Kate Ellis, President and CEO of GLAAD.

Morgan Stanley’s track record is impressive. For years, the firm’s Financial Advisors have provided wealth-planning services that meet the specific needs of LGBT clients. Historically, the ambiguity of state marriage laws has forced the LGBT community to navigate varying and complicated financial information. However, the guidance of Morgan Stanley’s Financial Advisors who specialize in the needs of LGBT clients can help couples understand their options and achieve their goals. “We were one of the first firms to support the Accredited Domestic Partnership Advisor designation, so our focus on financial planning, retirement planning and estate planning for LGBT clients is

just continuing along the lines of our commitment to serving the LGBT community,” says Chad Shampine, a Morgan Stanley Managing Director and Co-Chair of the company’s Pride & Ally Employee Networking Group. “The LGBT community is an important part of America, and an important part of our business overall.”

Morgan Stanley’s commitment to the LGBT community is not just about serving clients. The company devotes substantial resources to its Diversity and Inclusion programs, which work to ensure that the voices and opinions of LGBT employees at the firm are heard and valued. The firm’s Pride & Ally Employee Networking Group provides opportunities for LGBT employees to interact with mentors, establish relationships with colleagues across the business and develop their careers.

By creating a workplace environment where all employees can be themselves, Morgan Stanley gets something in return. “New research shows that there are real business reasons to focus on creating an inclusive work environment,” explains Susan Reid, Global Head of Diversity and Inclusion for Morgan Stanley. “Studies find that when employees have to hide an important part of who they are, it really affects their ability to contribute at an optimum level in the workplace.”

Simply put, fostering an office culture that’s more inviting allows employees to reach their full potential. “These are stellar professionals who are going to do a terrific job,” adds Reid. “This just allows them to take it even one step further.”

Beyond the client and internal programs that support the LGBT community, Morgan Stanley recently hosted the fifth annual Out on the Street: U.S. LGBT Leadership Summit in New York City. At the event, hundreds of senior leaders from across the financial services industry gathered to focus on the progress made and the challenges that remain in realizing full LGBT workplace equality. The annual event offers executives a forum to discuss how LGBT issues impact financial firms and the industry overall on a local and a global level.

“It’s easy to think about LGBT issues in New York or London, but the reality is that the modern financial services firm stretches across many different countries with many different cultures,” says Shampine. By encouraging competing financial institutions to come together to share best practices, the conference helps everyone make strides in advancing LGBT causes. “There’s no us-versus-them mentality in this challenge—we win together,” adds Shampine. “The financial industry has a leadership role to play, and we are happy to lead the charge.” — *Lisa Freedman*



Morgan Stanley

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# The Buffetts' Biggest Investment

By  
Karen Weise



Photo illustration  
by  
Brea Souders

47

# How the billionaire's family secretly funded a revolution in birth control



**K**atherine O'Reilly, a certified nurse midwife in her 30s, works full time at the Mesa County Health Department's clinic in Grand Junction, Colo., and she's eager to show off the clinic's stash of one of the most effective forms of birth control. First, though, she has to get out her electronic badge to unlock a heavy wood door with a paper sign, "PLEASE KEEP DOOR CLOSED AT ALL TIMES!!!" She surveys shelves packed with boxes of gloves and gauze, then walks over to an unmarked metal cabinet.

She opens it and bends down to look at the bottom shelves. "There they are!" she says, as if they'd been hiding from her.

She points to a stack of long, slim packages the size of a box of chocolates. Inside each is an intrauterine device and a tall, skinny straw that clinicians use to insert the flexible, T-shaped pieces of plastic into a uterus, where it can prevent pregnancy for as long as 10 years. "When I see patients, my goal is to be able to initiate contraception today," she says. That means having IUDs in stock is essential.

It's also expensive. IUDs can retail for more than \$800 each, so a public health clinic such as Mesa County's that attends to women with little or no medical insurance treats the devices almost like a controlled substance. The clinic spends \$774,000 a year to serve a rural county of some 150,000. It can stock the pricey devices thanks in part to a statewide initiative to reduce unplanned pregnancies. The \$24 million for the six-year effort came from an anonymous donor.

That funding ended in July. Luckily, O'Reilly says, there's now a lower-cost alternative. This summer, the clinic got its first shipment of an IUD named Liletta that hit the market in April. Liletta is manufactured and sold by Allergan but was developed by a non-profit, Medicines360, whose entire seed funding—\$74 million—also came from an anonymous donor. "Our clinic can get Liletta for \$50," O'Reilly says. "With our population, once we get that going, Liletta will be the one most women choose."

A decade ago, almost no one in the U.S. had IUDs because of the device's awful history and lingering reputation. By 2013, however, as women learned about superior, safer designs, IUDs had become the method of choice for more than 10 percent of women using contraceptives, according to data from the Centers for Disease Control and Prevention. Among women age 25 to 34, they're as popular as condoms, and they're far more effective. The U.S. contraceptive market, including pills and IUDs, totaled more than \$6 billion in 2013, according to Transparency Market Research.

A multiyear study of almost 10,000 women in St. Louis found that when providers offered women all forms of contraception for free, 75 percent chose IUDs and hormonal implants. The study's been cited by several medical groups, including the CDC as part of its recommendation to doctors to encourage IUD use. This study received close to \$20 million, also from an anonymous donor.

Almost all women—and therefore men—use a form of birth control at some point in their lives, yet contraception is so polit-

ically and legally radioactive that legislators and pharmaceutical companies avoid funding it. So it's no coincidence that the money behind the Colorado initiative, the St. Louis study, and Liletta all came from an unnamed philanthropic source—they all were from the same discreet foundation. Very few people will discuss The Anonymous Donor on the record, but tax filings, medical journal disclosures, and an archived interview with a foundation official show the funds come from Warren Buffett, the chairman and chief executive officer of Berkshire Hathaway, and his family.

At the Mesa County Health Department clinic in Colorado

Named for Buffett's first wife, the Susan Thompson Buffett Foundation is the third-largest family foundation in the country, behind only the Bill & Melinda Gates and Ford foundations. In 2013, the most recent year for which tax filings are available, it gave away almost half a billion dollars, largely to organizations dedicated to reproductive health. It barely maintains a website, studiously avoids press, and has about 20 people on staff. The foundation and Buffett didn't respond to requests to comment for this article.

But in a January 2008 interview for a reproductive health oral history project that hasn't previously been made public, Judith DeSarno, the Buffett Foundation's former director for domestic programs, was candid about the foundation's giving.

"Buffett alone will give more than all of the other foundations combined in reproductive health," she said. "We already are this year, and that will continue." DeSarno declined to comment for this article, other than to say, "I am incredibly proud of this work and the dramatic decrease in unintended pregnancies."

In the past decade, the Buffett Foundation has become, by far, the most influential supporter of research on IUDs and expanding access to the contraceptive. "This is common-sense, positive work to help families meet their dreams and

their needs in planning their pregnancies," says Brandy Mitchell, a nurse practitioner who coordinates family planning at Denver Health, a state-run provider. "Why we have to rely on a donor to make this happen is beyond belief."

Quietly, steadily, the Buffett family is funding the biggest shift in birth control in a generation. "For Warren, it's economic. He thinks that unless women can control their fertility—and that it's basically their right to control their fertility—that you are sort of wasting more than half of the brainpower in the United States," DeSarno said about Buffett's funding of reproductive health in the 2008 interview. "Well, not just the United States. Worldwide."

**Distrust of IUDs dates to 1971, when A.H. Robins Co.** started marketing an IUD called the Dalkon Shield.

It was a circular piece of plastic resembling a crustacean with 10 little arms. More than a dozen other such devices were on the market in the 1970s, in part because the government didn't regulate IUDs. "You could make your IUD in your garage," says Eve Espey, a doctor who helped write IUD guidelines for the American College of Obstetricians and Gynecologists.



**"You can't send out a press release, and you can't talk about, 'We got Buffett money'"**

With aggressive marketing, the Dalkon Shield quickly became the most popular IUD in the U.S., selling more than 2 million devices in three years. But soon horrific problems arose. All IUDs have a short string that's used to eventually remove the device, but the design of the Dalkon Shield's string drew bacteria into the uterus, causing infections that made some women infertile and have ectopic pregnancies. Several women died. In 1974, A.H. Robins, hit with what would total \$12 billion in lawsuits, discontinued the Dalkon Shield. After that, almost no one would touch IUDs, pharmaceutical companies especially. For almost two decades, medical guidelines cautioned against them, stipulating their use mainly for older women who smoked so much it interfered with the effectiveness of the pill.

The Dalkon Shield fiasco propelled the U.S. Food and Drug Administration to gain oversight of medical devices, and in 1984 it approved the Paragard, a copper IUD developed by the Population Council, a nonprofit whose funders have included the Buffett Foundation. But the Paragard never gained mass appeal, and for more than a decade, medical research into IUDs all but stopped.

At least in the U.S. In Europe, research indicated that well-designed devices didn't increase the risks of infections or infertility. Oddly, the research was less conclusive on how, exactly, IUDs prevent pregnancy. They make the uterus inhospitable to sperm, so maybe that's it. Some also act to thicken the walls of the cervix, which reduces the space for sperm to wiggle into the uterus. IUDs may also make it hard for a fertilized egg to attach to the uterine lining. And, unlike the pill, they don't require daily maintenance, which reduces the risk of user error. Whatever the combination of reasons, IUDs are 99 percent effective in preventing pregnancies, making them as effective as sterilization.

In late 2000 the FDA approved another IUD, Mirena, which emits a synthetic hormone. It was also developed by the Population Council. Its label allowed use by women who'd already had a child, and Bayer eventually owned the distribution rights. In 2002, fewer than 2 percent of American women used IUDs. But that was about to change.

**Warren Buffett met Susan Thompson through his sister,** who was Thompson's college roommate. The two married in 1952 and lived in their hometown of Omaha for more than two decades, during which Buffett bought and began building Berkshire Hathaway into one of the largest companies in the world.

Susan was a cabaret singer and passionate about women's rights. In the 1960s, the couple set up what was then called the Buffett Foundation, which focused on nuclear disarmament and reproductive health, including helping to fund Planned Parenthood as well as the development of RU-486, the so-called abortion pill. In the late '70s, the duo entered into an unusual arrangement—they remained married, but Susan moved to San Francisco. She also introduced Warren to the woman who would become his longtime companion, Astrid Menks, whom he married decades later after Susan's death.

Susan and Warren's daughter, Susie, moved to Omaha from Washington, D.C., in the mid-1980s, and her then-husband,

Allen Greenberg, started running the foundation's day-to-day operations in 1987. (Now divorced, the two work together at the foundation.) It's housed in the same downtown mid-rise as Berkshire Hathaway. In its fiscal year ended June 2002, it gave away \$33.4 million. Then, a series of events changed its giving exponentially.

For years, Berkshire's stockholders could designate a recipient for their share of the company's corporate philanthropy. Buffett and Susan often allocated their sizable portion to the foundation. Anti-abortion activists weren't pleased, but it wasn't until the early 2000s that the donations became a liability. In 2002, Berkshire acquired Pampered Chef, which sold kitchenware through a direct sales model akin to Tupperware parties. Pampered Chef brought Berkshire into the living rooms of homemakers in Middle America, opening a vulnerability anti-abortion activists exploited. After protesters called for a boycott, Pampered Chef's founder, Doris Christopher, appealed to Buffett.

"I thought we could tough it through, but we can't," Buffett told biographer Alice Schroeder for her 2008 book, *The Snowball: Warren Buffett and the Business of Life*. He said he felt Pampered Chef's saleswomen were at risk of losing business. "It hurts Doris, and these are her flock. They're getting injured." Schroeder went on to write, "He didn't say it, but implicitly, not just their livelihoods but their physical welfare was at stake."

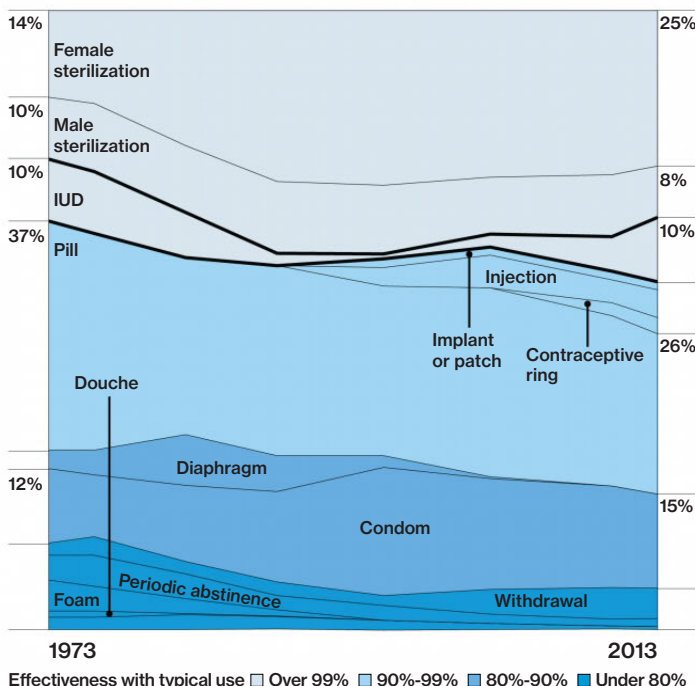
The Pampered Chef clash forged a line between what Buffett, investor and employer of hundreds of thousands, would tolerate and what Buffett, the individual, could endure. "When it's his own view—it's his own money—who cares what you think?" says Jeff Matthews, an investor who's written several books on the company. "He is not going to change his own personal behavior." Berkshire ended its shareholder corporate-donation program in 2003. But Buffett kept on giving from his personal wealth.

In 2004, Susan died of a stroke at age 72, leaving about \$2.5 billion of her estate to the foundation, which was renamed after her. The foundation's board reorganized. Buffett relinquished his seat, and Susie became board chairman. Buffett later said he'd always assumed his wife would outlive him and be the one "who oversaw the distribution of our wealth to society." Her death forced him to reassess his plans for the more than \$40 billion in Berkshire stock he held at the time.

In 2006, Buffett announced his decision in a cover story of *Fortune*, pledging to eventually donate 85 percent of his Berkshire stock, valued then at \$37 billion, to philanthropic causes. He committed the bulk to the Gates Foundation, with the remainder going to the three foundations run by his children and a million shares, then worth more than \$3 billion, promised to the Buffett Foundation. According to tax and regulatory filings, since 2006 Buffett has given \$1.7 billion of his Berkshire shares to the foundation. Almost 60 percent of the original bequest, now worth roughly \$4.2 billion, remains pledged to be transferred to the foundation over the coming decades.

Foundations must spend at least 5 percent of their assets each year, so the

## 40 Years of Birth Control



WOMEN AGE 15 TO 44. 1973 AND 1976 DATA OMITTS SINGLE WOMEN WITHOUT CHILDREN. DATA: CDC, GUTTMACHER INSTITUTE.



new influx from both Susan and Warren forced the foundation to expand quickly. In September 2006 it hired DeSarno, the longtime president and CEO of the National Family Planning and Reproductive Health Association, a group that represents women's health clinics that receive federal support. She'd led the group to push for broadening access to low-cost contraception.

In the 2008 interview, DeSarno said Pampered Chef did affect the foundation in at least one way: It continued to fund what it wanted to fund but made anonymity a condition of its bequests. "It has to be as 'anonymous,'" DeSarno said. "You can't send out a press release, and you can't talk about, 'We got Buffett money.'"

In 2005 the Buffett Foundation gave away about \$60 million globally. In 2007 it donated \$79 million in the U.S. alone, DeSarno said in the 2008 interview. "Next year I'm going to give at least \$50 million more than I gave this year."

DeSarno also worried that the foundation's huge gifts would cause other donors to move their funding to different causes.

"That scares me to death, and that really does say, 'Judy DeSarno gets to figure out what happens in the United States on reproductive health in terms of who gets funded and who doesn't,'" she said.

As the foundation's spending grew, so did its focus. Earlier, it had concentrated on abortion-related work. Its new spending would expand to include at least \$200 million to avoid abortion by building the research, policy, and commercial foundations to promote the rise of IUDs.

**The first step involved building better** academic, peer-reviewed research on IUDs, particularly looking at the public health effects on teens and women who haven't had kids. Increasing the medical literature would help win over doctors who remained averse to promoting IUDs to these very women.

"In December 2006, I got a call from an anonymous foundation, and they said they would like to help women use the most effective methods of contraception," recalls Jeffrey Peipert, a doctor and leading researcher with the Department of Obstetrics and Gynecology at Washington University in St. Louis. "They said, 'You come up with a program to promote and encourage the use of the most effective methods,' and I suggested we do a project where we make all contraceptive methods free and see what they choose." The foundation asked for back-of-an-envelope calculations for a budget, according to an account published by the university's press office. "He e-mailed the head of the foundation asking for some idea of how many patients he should plan to recruit," the university reported. "The director told him to 'THINK BIG! Happy Hanukkah!'"

Peipert says he can't discuss his benefactor. "We were told in all correspondence and all journal articles, we would list them as the anonymous foundation," he says. "I'm sure they have good reasons for this, and it probably has to deal with the other things they fund." Much of the foundation's other grants go to abortion-related work.

The *New England Journal of Medicine*, which requires funding disclosures, reported the Buffett

Warren and Susan Buffett at the White House in 1998



**The teen birthrate dropped 40 percent from 2009 to 2013, and the teen abortion rate was down by more than a third**

Foundation's support for the study known as the Contraceptive Choice Project, and tax forms show the foundation gave Washington University about \$20 million beginning in 2007, when the study was launched, through 2013. (Peipert says his budget was "not quite" that amount.) The Choice Project remains the biggest U.S. medical study of IUD users conducted.

In August 2007, Peipert and his team began recruiting 9,256 women from across the St. Louis area. About half had never been pregnant, and more than 20 percent were teenagers, some as young as 14. At clinics around the city, researchers counseled the women about all the different types of birth control, with an emphasis on IUDs and implants, offering them all for free. They followed the women for more than three years.

In 2010, Peipert and his colleagues published their early findings in the *American Journal of Obstetrics & Gynecology*, reporting that 56 percent of the women chose IUDs, with an additional 11 percent opting for hormonal implants.

The findings immediately provided a jolt to the field, making a powerful argument to practitioners and policymakers that women would want IUDs if they knew about them and had access to them. The St. Louis researchers published at least 50 more papers.

The Choice Project has had the kind of wide-ranging impact that donors rarely see. In 2011, the American College of Obstetricians and Gynecologists updated its guidelines for the first time since 2005 to support a broader use of IUDs. It cited the Choice Project findings in the first paragraph. In 2014 the CDC also pointed to the Choice Project in its recommendations for practitioners teaching women about birth control options: They should start by introducing the most effective ones, such as IUDs.

**Academic research wasn't enough,** though; the foundation wanted to get inside the clinics where women were making birth control choices and ensure they were aware of, and could afford, the most reliable options. So

it decided to pick two states and pour resources into them—supporting provider training, social marketing, and lower costs—to change the perception of IUDs and build political support for the devices. The first, ahead of the 2008 presidential primary, was Iowa.

"Allen was hoping we would be up and running...so that presidential candidates would have to comment on access to family planning, not abortion," DeSarno said in the 2008 oral history. When her assistant first called local family planning clinics, no one had heard of the Buffett Foundation, even though it was already a major donor, DeSarno said. They recognized DeSarno's name, though, and some people cried when they heard there was money coming their way. Over five years starting in 2007, the Buffett Foundation would spend more than \$50 million in the Hawkeye State.

The foundation began making a big push into Colorado, a far larger and more diverse state, in 2008. "They didn't want some completely blue liberal-leaning state, where people could go, 'Of course they can do it there because of the politics,'"

says Greta Klinger, the spokeswoman for the Colorado Initiative to Reduce Unintended Pregnancies, as the effort was known. Klinger acknowledges the Buffetts provided the funding but still generally talks about “the foundation” when discussing it.

Tax filings show that from 2008 to 2013, the Buffett Foundation spent about \$50 million in Colorado, with roughly half going directly to the state. The state spent about half of its funds to purchase the devices, so they’d be free. The rest of the state’s funding went to hiring and training clinicians. Mesa County Health Department head Jeff Kuhr says it took several years and almost a complete staff turnover to be able to introduce IUDs. The clinic hired O’Reilly and another nurse midwife who have been trained in counseling and insertion. In 2013 the clinic inserted 101 IUDs and implants; so far this year, it’s inserted 189.

Last year, Colorado Governor John Hickenlooper released results of the initiative, showing the kind of change DeSarno said she’d hoped would persuade policymakers to back family planning. The teen birthrate dropped 40 percent from 2009 to 2013, and the teen abortion rate was down by more than a third. “This initiative has saved Colorado millions of dollars,” Hickenlooper declared.

This spring, when the legislature debated taking over the funding after the Buffett donation ran out, conservative legislators voted against providing support, saying the efforts amounted to mini abortions—and anyway, private donors could fund it. The state is now soliciting other foundations, but even without additional funding the initiative may have lasting effects. “A couple of years ago, there wasn’t a lot of interest from outside providers,” says Klinger. “I think that’s shifting. We have hit a critical point in the state that people are saying, ‘Oh, oh, there really is a demand for this.’” With minds changed, the remaining barrier is the cost of IUDs themselves. The Buffetts have a fix for that, too.

**“You know, it’s worth taking a look at getting a generic IUD,”** DeSarno mused in the 2008 interview. “People can’t get it at a good price.” Now, seven years later, a good price is just what the Buffett Foundation has achieved. This April, Liletta, the low-cost IUD, became available. Its design isn’t revolutionary, but its business model is.

From the beginning, the aim for Liletta was a product that would cost public clinics just \$50 and wouldn’t require foundation funding in perpetuity. In 2008 the foundation hired Victoria Hale as a consultant, according to tax filings. The following year, Hale, a MacArthur Genius Grant recipient, founded Medicines360.

The patent for the Mirena, which Bayer distributes and retails for as much as \$800, expires later this year, so Medicines360 could have waited and made a knockoff for cheap. But at the time, the FDA didn’t have a way to approve a generic IUD, according to David Turok, a gynecologist at the University of Utah who worked on Liletta’s clinical trial. Merely selling a low-cost device also wouldn’t guarantee Medicines360 could generate enough revenue to support itself. “The initial funder said, ‘Look, I will fund the R&D, the full ride to approval, but then you have to be self-sustaining,’” says Pamela Weir, Medicines360’s chief operating officer.

So Medicines360 developed a hormonal IUD almost identical to Mirena. The idea was for the nonprofit to partner with a company that would sell it at market rates for people with good insurance, essentially subsidizing the low prices for the public sector. For the nonprofit to have a branded product

whose distribution rights it could sell, Medicines360 needed a clinical trial, Turok says. Most drug trials are as small as necessary to get approval, but Medicines360 designed an expansive trial to broaden access, hoping the IUD’s official FDA label would show that nearly all women of childbearing age could safely use the device. It signed up 1,751 women age 16 to 46. The multiyear study found Liletta to be 99.45 percent effective in preventing pregnancy, regardless of factors such as age and weight. This February, Medicines360 and the Buffett Foundation got what they wanted. The FDA approved Liletta for use of up to three years, saying it’s safe for almost any woman, with a few exceptions, such as if she’s pregnant or has acute pelvic inflammatory disease.

Jessica Grossman, who recently replaced Hale as CEO, says she can’t discuss the funding source, yet according to the Buffett Foundation’s tax filings, it’s given more than \$74 million to Medicines360. “All we can say is that we had an anonymous donor,” Grossman says. “I wish I could be more helpful, because I know it’s a fascinating story.”

Allergan sells Liletta for slightly less than what Mirena costs, but, as the foundation required, public clinics pay only \$50. Allergan agreed to pay Medicines360 \$50 million upfront, plus as much as \$125 million more in addition to royalties. Grossman says Medicines360 is using the proceeds to develop new products for women and keep the Liletta trial running in the expectation of getting FDA approval for using the device up to seven years.

**The Buffetts’ strategies have been so successful in building the** medical, policy, and market infrastructure for IUDs that even proponents have begun to worry enthusiasm has gone too far. While IUDs produce great results from a public health perspective—and, as the Choice study found, women tend to be happy with them—there are many reasons for a woman to choose other contraception, they say. She may like how the pill reduces her acne, how a condom protects against sexually transmitted diseases, or how she can simply stop using other methods, rather than having to go to a clinic to have an IUD removed.

Rachel Benson Gold, a longtime researcher at the Guttmacher Institute, which receives Buffett support, published a paper last summer arguing that policymakers need a “delicate balance” between making IUDs accessible and ensuring women aren’t coerced into using them, particularly since so many efforts target low-income women.

There are reasons Gold and others might be nervous. This March, a state legislator in Arkansas proposed a bill that would pay unwed, low-income mothers on Medicaid \$2,500 to get an IUD. That echoes a not-so-distant controversy over the Norplant hormonal implant. After it hit the market in 1991, legislators in more than a dozen states introduced bills that would have pushed women into getting the implant as a condition of welfare, in lieu of jail time, or in exchange for cash. The Norplant inventor expressed horror that women could be coerced into using a contraceptive he’d designed to help them gain control of their own fertility—and future.

If more policymakers try to contort the effectiveness of IUDs into a tool for social engineering or make its use a condition for state support, the Susan Thompson Buffett Foundation may find itself needing to fund yet another battle—to ensure that a woman not only has access to an IUD, but that it is her choice to get one. **E** —With Noah Buhayar

Actual size  
of the Liletta  
IUD





# HACKING THE STRAWBERRY

D r i s c o l l ' s   i s   b r e e d i n g

t h e   f r u i t   o f   t h e   f u t u r e

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B y   D u n e   L a w r e n c e

P h o t o g r a p h s   b y

C a r l o s   C h a v a r r i a





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few years ago, during his commute across California's Pajaro Valley, Phil Stewart began stopping more regularly at the Burger King in Watsonville. He wasn't just there for the Whoppers. He was visiting a wild strawberry plant. Stewart, an affable 41-year-old with sandy hair, breeds the fruit for Driscoll's, the largest player in the \$5.6 billion U.S. berry market. He was struck by the plant's vigor—sprouting at the edge of the sidewalk without much water or soil, blanketed in the exhaust of cars waiting at a stoplight. Stewart dropped in on it for two years, waiting for it to fruit. When at last he found two small berries on the plant and tasted one, it was delicious.

Strawberries grow almost everywhere in the world, though nowhere as bounteously as they do along this particular stretch of the California coast, about 95 miles south of San Francisco, where the Pajaro River empties into Monterey Bay. The Spanish explorer Sebastián Vizcaíno, anchoring nearby in 1602, found wild strawberries in December, which was unheard of in Europe. Explorers to other parts of the New World also discovered strawberries with marvelous advantages in color, size, and flavor, and took botanical specimens home. Two of these crossed to yield the modern strawberry, *Fragaria x ananassa*, in the 18th century.

Today, California produces almost 29 percent of the world's strawberries—\$2.6 billion worth—a lot of that from the 14,200 acres of fields that surround Watsonville and neighboring Salinas. If you come here to visit those in the business, most conversations conclude with the offer of a 1-pound tub, or sometimes a whole flat. The town's annual strawberry festival, its 21st is this year, boasts pie eating contests and strawberry pizza.

But this is not a festive time for the industry. For decades, growers used methyl bromide to kill off bugs and diseases in the soil; hired cheap labor from Latin America; and enjoyed plenty of water. Yields and profits went up in a straight line, as strawberries became a large, firm, uniformly red supermarket staple and global commodity, cheap enough to pack daily into a breakfast smoothie or a kid's lunch. Yield per acre in California has increased almost fivefold since the 1950s.

Each of those advantages is now disappearing. It turns out that methyl bromide, a chemical introduced as a pesticide in 1932, eats through the ozone layer. Fol-

lowing the 1987 Montreal Protocol, the U.S. is finally coming close to a complete phaseout. Labor is in short supply and getting more expensive. And no one knows how long the California drought will last or how the state will fix its water problems. The state's strawberry acreage has dropped about 4,000 acres in the past two years, a decrease of 11 percent, as some growers have abandoned the fruit.

This is what pulled Stewart back to the Watsonville Burger King. He's always on the hunt for plants that will help him create the strawberry of the future, tough enough to thrive with less water, less care, fewer chemicals. In 2009, impressed by the sidewalk strawberry's will to survive, Stewart plucked one of the berries for its seeds and drove it 5 miles down the road, where Driscoll's runs one of the biggest strawberry breeding programs in the world.

At Driscoll's headquarters, a welcome cart sits by the front door: strawberries, blueberries, and raspberries, along with tongs and cocktail napkins. There's another platter in the conference room and yet another in the recently renovated company kitchen, where exposed beams and pipes float above wooden tables. Employees serve as the first taste testers

for varieties that Stewart and his team create. "I don't think there are too many days I don't have berries," says Soren Bjorn, who manages Driscoll's business in the Americas, helping himself to some in the conference room. "We have well over 100,000 internal taste tests a year."

Driscoll's breeding program predates the company itself. In 1944 a group of strawberry farmers founded the Strawberry Institute of California, dedicated to the development of new and better varieties. Driscoll Strawberry Associates, formed as a grower's cooperative in 1953, merged with the institute in 1966 and got out of physical farming. Since then, the company has focused on the two ends of the supply chain.

Driscoll's has a staff of 30 scientists devoted solely to strawberries, manipulating evolution at nine research stations in Watsonville, Southern California, Florida, Spain, Mexico, and the U.K. The company provides seedling plants to contracted growers. Then, when the growers harvest the berries, Driscoll's packs, ships, and markets them to retailers. The growers get 85 percent of the revenue; Driscoll's keeps the rest.

Driscoll's is a private company and family-owned. The chairman, Miles Reiter, is the third generation of Reiters



Stewart in a Driscoll's greenhouse



to run the business, and his daughter manages operations in Chile. Driscoll's doesn't disclose financial data but estimates that it has 34 percent market share of U.S. strawberry sales—48 percent in organic. Bjorn says Driscoll's brand name helps command as much as a 30 percent price premium over competitors.

It can charge that much because Driscoll's, more than any other company, has created the strawberry as most know it: large, uniform, bright red, firm, and available 365 days a year.

"I didn't realize how complex it was until I really got here and saw it up close," Bjorn says. Consider the berries you expect to find at Whole Foods Market, one of Driscoll's top clients. As soon as they're picked, they are inspected and graded on size, color, and sugar content; chilled; and trucked out to customers within hours. It takes about four days by land to get berries to the East Coast. By the time you see them at Whole Foods, five to seven days after picking, the berries must be just the right shade of shiny red—not dull, and not too color-saturated, either, because consumers think too deep a color means the berries have started to spoil. They should be plump and pleasingly heart-shaped, with perky green crowns and no browning leaves. Strawberry lovers are exacting.

"I was in Georgia last week, and I was in Whole Foods, and there was this woman picking up Driscoll's berries," Bjorn says. The shopper picked up the clamshell—a Driscoll's invention—flipped it around to check all sides, put it down, and took another one. "She's never going to 100 percent trust the brand, just because it says Driscoll's on it. I mean, she may have a good association, but she's still gotta look."

Each container Driscoll's sells in the U.S. and Canada has a code on the back that tracks variety, grower, and harvest date. Originally a food safety measure, it's become a way for Driscoll's to test the market. Consumers can enter their codes on Driscoll's website and tell the company what they think. People actually do this, and Driscoll's learns interesting things. For example: The most avid strawberry buyers—Bjorn calls them "heavy" and "super heavy," like grades of crude oil—often buy conventional strawberries for themselves and organic strawberries for their children.

Having spent decades building a brand known for consistent quality, Driscoll's thinks consumers are ready to pay more for super premium varieties. "You have that kind of segmentation in many other products—like cars—and you begin to see

the beginnings of that in berries," Bjorn says. "We think that's sort of where the next frontier is."

The U.K. market is especially encouraging. There, Driscoll's Jubilee line, marketed as "the Queen of Strawberries" and featuring a rich ruby coloring, commands a 30 percent premium over other varieties. In the U.S., the company has introduced a blackberry variety that's especially flavorful, which it sells as "Season's Finest" for just a short period each year at a steep markup. Stewart is working on doing the same for domestic strawberries. "Fundamentally it starts with the genetics," says Bjorn. "If you don't have the genetics to support that, you can't make the product better."

In Driscoll's test field in Watsonville, the strawberries run out toward the hills in straight lines, two rows to each raised bed, each bed coated in silvery plastic and shimmering like mini highways in the sun. By mid-April, the plants are sprouting thickly: crowns of juicy green leaves dotted with ready-to-pick red berries, light green ripening fruit, and white flowers. Amid the leafy abundance, five beds stand out like a desert island, with meager stunted rings of yellowed leaves, barely poking out of the earth. They're in a section



The test field in Watsonville



# HOW TO MAKE A STR

Strawberries have eight sets of chromosomes, making them difficult to breed for particular characteristics but great for extracting la  
What you need: 1 Ziploc bag; 1 sieve or strainer; 1 measuring pitcher or large glass; 1 long shot glass or 1



**1. Partially thaw the strawberries and put them in the bag. Why frozen? Ice crystals bust open the walls of the strawberries' cells, releasing the genetic material. Add the pineapple and water and seal the bag.**



**2. Mash up the mixture. The more the strawberries are broken up, the more DNA you get. An enzyme in the pineapple called bromelain breaks down the strawberry chromosomes, leaving behind free-floating DNA.**



**3. Pour the mush through a strainer into a pitcher to remove the pulp. The DNA flows through the strainer because its negative charge attracts it to the positive ions in water molecules.**

that hasn't been treated with chemicals for 15 years, and it took Stewart and his team some time to figure out what might be wrong. Eventually, they found elevated salt buildup and did some additional irrigation to flush the soil, but the plants haven't caught up with the rest of the field.

"This is breaking my heart," he says. "This morning I was out here swearing about it, but I'm trying to be Zen. If you have a bum year, it costs you a lot of progress."

Stewart does a formal walk-through two mornings a week, snaking in S-curves through the rows with his two assistant breeders. Each block of plants, made up of siblings with the same parents, has its own bar-coded white plastic nursery tag, which he scans with a Bluetooth device that transmits data on the family to an iPad. Promising plants are marked with a white comment card attached to a stake, where the breeders jot down observations each week in tiny squares: tart, M+L (medium to large), FC (full color).

For a little berry, the genetics of the strawberry are astoundingly complex. Humans have two sets of chromosomes, making inherited traits such as eye color relatively easy to predict. The modern strawberry is octoploid—eight sets of chromosomes—and has a correspondingly huge increase in possible combinations that are expressed in qualities like flavor, size, color, and firmness.

Stewart starts a new breed by crossing two parent plants in a greenhouse. When the new plant is large enough, it sends out

tendrils called runners, which Stewart and his staff pin into pots. The runners sink roots and grow into daughter plants that are exact genetic matches. He starts with about 27,000 genetically distinct seedlings growing in the test field in April. About 1 percent of those get replanted for a second year, and fewer still see a second, third and fourth season in some of Driscoll's other test plots. Just one or two will graduate to testing in commercial fields, and, if all goes well, Driscoll's will name a new strawberry and release it to its farmers.

Driscoll's doesn't dictate to growers which of the company's varieties to plant, so the new must compete with the old. Stewart has been doing this since 2007. His first breakthrough was the Del Rey strawberry, released in 2009. It's now the company's most-planted variety. Growers like it because it's not too bushy and the fruit hangs off to the side, which makes it easy to pick. Stewart demonstrates, cupping a nice red strawberry in his palm, with the stem between his forefinger and middle finger, twisting it off without pulling at the plant.

The average life span of a Driscoll's variety in the U.S. is about three years. Two others introduced by Stewart in 2009, Adelaide and Anita, haven't survived. Adelaide had excellent flavor but yields petered out later in the season. Anita, a sibling of Del Rey's, seemed to have good disease resistance in the test phase but fell prey to an outbreak of *Verticillium* wilt after release,

destroying confidence in the variety.

The most recent selection, Big Sur, gets good reviews from consumers for its flavor, despite a tendency to bruise. It outproduces Del Rey, but, being bigger and bushier, also takes longer to pick, so growers must weigh higher labor costs against a larger crop.

Stewart grew up on the other side of the continent, in Cuba, N.Y. After graduating from a local university with a degree in biology and no clear plans, his mother's cousin's husband invited him to apply for a summer job at Cornell University's college of agriculture. He ended up spending five years working with grapes. After that, he says, "I always knew I wanted to be in fruit." His Ph.D. work at the University of Florida focused on strawberries.

Stewart has a taste for abstruse subjects. He's been fascinated by ancient Egyptian hieroglyphics since the fifth grade, and is good enough at deciphering them to translate, when the need arises, for a friend in London who's an antiquities dealer. More recently, he's taken up the study of the Rongorongo script, found on a small number of artifacts from Easter Island. He brings that same intellectual bent to his work as a strawberry breeder. He likes going back to older varieties, and these experiments are obvious in the test field, where a patch of *Fragaria vesca* 'Alexandria' towers over the other plants in its bed, displaying tiny, jewel-like berries. The species is highly disease-resistant but almost impossible

# A W B E R R Y      D N A      S H O T

large amounts of DNA. If that extraction is done right, it can make for a tasty cocktail. —*Blacki Migliozi (recipe courtesy of Genspace)*  
 test tube (3 oz.); 5 frozen strawberries; 3 chunks of pineapple; 1/4 cup of water; 1.5 ounces of Bacardi 151



**4. Fill the shot glass about halfway with the liquid. Fill the rest of the glass with Bacardi 151, pouring it along the wall of the glass to minimize mixing.**



**5. Wait a few moments. The alcohol and juice layers will remain separate as a cloudy layer of DNA forms where they meet, clumping together and rising toward the top.**



**6. You can use a toothpick to examine the fresh strawberry DNA. Bottoms up.**

to cross with modern breeds. “I tend to have to be careful not to be distracted by all the cool stuff,” Stewart says.

His competition, though he wouldn’t put it that way, is the strawberry breeding program at the University of California at Davis, which dates to the 1930s. (Its founders, Harold Thomas and Earl Goldsmith, decamped for the Strawberry Institute, which later became Driscoll’s.) Highly productive UC Davis varieties such as Tioga in the 1960s helped push yields in California steadily up. A man named Douglas Shaw ran the program from the mid-1980s until 2014, becoming legendary for such breeds as Albion, a blockbuster that many consider the tastiest of the California varieties.

Shaw has since started a private venture, California Berry Cultivars. Kyle VandenLangenberg, a breeder there, sees no point in the kind of experimentation that Stewart pursues with wild plants and older genetic strains. “I can’t put anything similar to a wild strawberry in a grower’s field,” he says. “That doesn’t translate into a multibillion-dollar industry.”

When not in the field, Stewart works at Cassin Ranch, a cluster of low-slung buildings and greenhouses 3 miles back across the valley. Stewart is especially interested in using older and unusual strains to handle environmental pressures. As fertilizer deposits accumulate and water tables drop, the soil in California is getting saltier. In one of the greenhouses at the ranch, beneath huge fans that fill the glassed-in

space with a lawn mower-like summer drone, he’s running a salt tolerance test. A metal table holds 365 plants, fed with drip tubes running into the black plastic planters. Most look unwell, with scorched brown leaves. Five at the end, though, have beautiful, glossy green leaves—this is *F. chiloensis*, one of the wild ancestors of today’s cultivated strawberry, and the species native to California’s beaches.

None of a strawberry’s many traits matters much without flavor. Stewart runs flavor assessments twice a week from mid-May through late August, using his colleagues as testers. He also eats a lot of berries himself, taking a bite out of as many as 200 a day.

When I visit Cassin Ranch, Stewart lines up nine strains of berries on a desk in the conference room, numbered with yellow Post-its. “Flavor Evaluation” forms and a plastic cup of mini pencils complete the setup. The scale runs from “Like Extremely” to “Dislike Extremely.”

After I taste and rate them all, Stewart tells me which is which. Del Rey I liked the least—it’s too sweet, maybe too soft. My favorite is Big Sur, Stewart’s most recent commercial variety. And I also liked one that turns out to be the competition, a UC Davis variety called San Andreas. Stewart describes it as “crunchy,” something he tries to avoid but which has its uses when you need a strawberry that will produce and ship well from April through the high heat of the summer months.

One of the varieties stands out on looks alone: a white berry with red seeds.

White strawberries were once common; to get that color, Stewart used material from the White Carolina, developed in the 1700s. It’s one of the oldest varieties for which there is still genetic material, maintained at the U.S. Department of Agriculture’s DNA bank in Corvallis, Ore. There are desirable traits associated with white, including resistance to rot and disease. Stewart’s white variety—so far unnamed—is about five generations in. Driscoll’s sells it in Hong Kong, where there’s a market for expensive white fruit. Stewart also used to bring them home when his kids were younger—white strawberries don’t leave stains behind the way reds do.

The noble line of the Burger King strawberry isn’t represented. Stewart selected two seedlings grown from the seeds he took from the original plant, evaluated small test plots, and made some crosses with other types. The tasty berries were marred by extreme seediness, and he dropped the strain after two generations.

Stewart continues his search. He’s working with a team to map the strawberry genome and identify genes associated with susceptibility to disease. I checked in with him as he prepared to leave on a solo trip to Easter Island, inspired by his study of the Rongorongo script. “I don’t think there are any strawberries on Easter Island, but there are in mainland Chile, and I’ll be spending a few days there, too,” he wrote in an e-mail. “I’ll keep an eye out.” **B**



# Cleaning Up Drug Lane

## An African startup takes on counterfeit medicine

By Yepoka Yeebo

Photographs by  
Nana Kofi Acquah

Drug Lane runs through a market in the heart of Accra, Ghana. It's past the office towers going up to the east of the central business district, past the pushy vendors with fake Louis Vuitton luggage, and past the women selling trays of raw beef under the midday sun. The alley bristles with signboards for pills, powders, and other substances. One store is packed to the rafters with boxes of painkillers and antibiotics. On the wall are two posters: One is for Coartem, a malaria treatment made by the Swiss drug company Novartis, and the other advertises something called Recharger, supposedly made from the male silkworm moth. The notice is vague about specific uses, but it does advise using condoms.

The man behind the counter, Yaw Frempong, can't recommend either drug—at least not formally. Like 85 percent of the people selling medicine in Ghana, he isn't a pharmacist. Most of his stock comes from China, India, and Malaysia, imported by Ghanaian distributors who supply everyone from "licensed chemical sellers" like him to actual pharmacies and hospitals. It's a system so porous that as many as one in three medicines sold on Drug Lane could be counterfeit, according to the U.S. Centers for Disease Control and Prevention, compared with about 1 percent in the U.S. and Europe. The fake drugs often have no active ingredient at all, or just enough to pass quality-control tests, and visually they can be indistinguishable from the real thing. One study, published by the *American Journal of Tropical Medicine and Hygiene*, found that in just one year, fake and poorly made malaria drugs contributed to the deaths of more than 100,000 children across Africa.

Nongovernmental organizations, international agencies, and other groups have tried to address the problem. A Ghanaian entrepreneur thinks he has an answer. Bright Simons announced the







Many Ghanaians shop for pills in open-air markets, where the fake may be indistinguishable from the real



creation of his company, MPedigree Network, at a news conference on Drug Lane in 2007. MPedigree sells software that manufacturers use to label individual packs of medication with a random 12-digit code hidden under a scratch-off panel on the packaging. When a person buys medicine, she can text the code to MPedigree for free and get an instant reply telling her whether the product is authentic. Today, MPedigree says it has labels on more than 500 million drug packets. Clients include the drug companies AstraZeneca, Roche, and Sanofi.

As it's grown, MPedigree has kept its identity fluid—adopting the startup label to attract attention and court investment, and other times emphasizing that it's a social enterprise, the better to work with large multinationals with corporate responsibility mandates. The data MPedigree is collecting on African consumers has opened business possibilities that are strictly for-profit. Today the company authenticates a variety of commonly faked goods, from makeup to electrical cable.

It's an unorthodox path for a startup, but then nothing about starting a company in Accra is conventional. MPedigree's labels are printed in China and India, and its data centers are on three continents. Very little of this Ghanaian company's business actually happens in Ghana. It's a tough place to work. Blackouts can last 24 hours. The cedi was for most of this year the worst performing currency in sub-Saharan Africa. "We don't keep infrastructure locally," says Simons. "It's virtually impossible at a reasonable cost." He outsources critical services, such as Web hosting, to companies in places with regular power supplies. MPedigree puts up with it all, Simons says, in part to observe consumer behavior that outsiders never could—but mostly because it's home.

**Simons, 33,** shuttles among the company's offices in Egypt, Ghana, India, Kenya, Nigeria, and Tanzania and scouts for new business in Bangladesh, Rwanda, Sierra Leone, South Africa, Uganda, and Zambia. One evening in May, he's in the lobby of the charmless, glossy Fiesta Royale Hotel in Accra. He keeps breaking away from an interview to read e-mails about a single authentication code that's been checked 1,500 times over the past few days. Somebody has taken one genuine code, made thousands of copycat labels, and attached them to counterfeit morning-after pills somewhere in Nigeria. MPedigree is calling everyone who'd tested the fake code to find out where they got the drug and alerting regulators and law enforcement. A similar thing happened in March, Simons says; MPedigree was able to use its data to track down a warehouse full of fake malaria medication.

Simons is deeply geeky, apt to digress into topics such as the lives of galley slaves and obscure characters in *Mad Max: Fury Road*. He grew up in Sunyani, a small city about 250 miles from Accra. He played on his own until he was 8 because his parents, worried about the consequences of Ghana's last coup d'état, wouldn't let him go outside. Simons studied for a time in the U.K., then bounced around Europe on a research grant. In 2004, watching as Facebook was born and Google became a behemoth,



**Simons has put MPedigree codes on more than 500 million drug packets**

he decided to start an enterprise in Ghana. He'd caught startup fever.

In London, Simons had seen organic food sell at a premium, and he realized Ghanaian farmers were missing out. Their produce was organic, but they couldn't afford the inspections to prove it to wholesale buyers. What if there were a cheaper way to determine the origin of a head of cabbage? While still in Europe, he enrolled in business plan competitions and recruited Ph.D. students to do coding. The software they wrote assigned random codes to vegetables, printed on their labels; the idea was that buyers would go to a website, enter the code, and gain access to a webcam feed of the specific farm it came from. It was a hazy concept, more about trust than ironclad proof of origin, and it "failed spectacularly," Simons says, when few farmers were able to afford webcams.

Simons looked for other ways to use the idea. One target seemed

especially worthy: Bootleggers were flooding West Africa with fake drugs. Simons found it was a lot easier to convince people that pharmaceuticals needed to be traced to their source than cabbage. With money he earned from a consulting gig, he and his coders started building a product that actually worked: software that created unique codes, stored them in a database, provided instant verification by text message, and sent alerts to buyers if a code was bogus and to manufacturers if a code was used more than once. Simons incorporated MPedigree as a non-profit in 2007 and called his news conference.

The need was urgent. In an especially grim case, in November 2008, children in Nigeria started dying after unexplained fevers and vomiting. After three months and 84 deaths, officials traced the outbreak to a painkiller. The manufacturer had replaced the harmless propylene glycol—a faintly sweet compound used as a solvent in medicines—with diethylene glycol, a faintly sweet industrial solvent sometimes used in brake fluid. The latter attacks the central nervous system and causes liver damage and kidney failure. In Nigeria, three-quarters of the children who took spoonfuls of syrup from batch 02008 of My Pikin Baby Teething Mixture died.

MPedigree's first labels went on 3,000 bottles of a similar drug in Ghana that year. Parents checked every last code, Simons says. He trumpeted the response rate to government agencies and drug companies but found few people willing to take a small non-profit seriously. Ghana is littered with failed attempts at charity. Simons discovered that pharmaceutical companies weren't likely to do business with them; venture capital firms wouldn't fund them; regulators would ignore them; and talented developers wouldn't work for them. MPedigree's chief engineer quit to start a for-profit rival. In 2009, Simons reclassified MPedigree as a social enterprise—a hybrid organization that "owe[s] equal duty to our consumer clients, pharmaceutical clients, impact investors, and regulatory allies." (A nonprofit division remains, mostly to work with governments.)

Funding remained a problem. Startups in Africa raised just \$27 million in 2014, according to Venture Capital for Africa, a company that connects entrepreneurs and investors. Most of it went to founders in Kenya, Nigeria, and South Africa. Ghana

has had few obvious startup successes. One, a customer service tool called Dropifi, moved to Silicon Valley to join an incubator there; another, Saya Mobile, was bought by an Indian company. The lack of big “exits”—acquisitions or initial public offerings—is part of a self-reinforcing cycle that keeps investors cautious, says Leticia Browne, head of investor relations at the Ghana Angel Investment Network. Most new ventures are either self-funded or bankrolled by high-net-worth individuals who know a company’s founders personally, she says.

Simons reinvested early profits and paid staffers with grants from Ashoka, a network that funds social entrepreneurs. MPedigree struggled in East Africa, pulling back because it couldn’t invest in call centers. “I started to realize that we couldn’t do this as a little startup,” says Simons. He had to figure out other ways to grow. He knew that as a social enterprise, MPedigree could appeal to large corporations that had budgets for projects with humanitarian (and PR) appeal.

MPedigree’s two biggest needs were cloud servers to manage data and partnerships with major cell phone networks. Simons made calls until he got a meeting with Hewlett-Packard and sold them on his company’s technology and mission. He spent months taking red-eye flights from Accra to London, changing into a suit at Heathrow and taking the tube straight to the offices of a law firm that was giving MPedigree pro bono legal advice “to deal with all these fire-powered lawyers that HP had lined up,” he says. “We had one interest to protect: our intellectual property.” In December 2010, HP announced it would run the data centers that host MPedigree’s codes—saving Simons \$10 million, by his estimate, in infrastructure costs. He also persuaded Safaricom, a Vodafone subsidiary; MTN Group; and other mobile carriers to subsidize the cost of text messages.

With its technology upgraded, MPedigree was able to expand to India and other markets. A successful 2012 trial with Nigeria’s

Branttie says. “That is how counterfeits are able to thrive.”

Like other startups, MPedigree has been frustrated at how difficult it can be to get its digital product into the real world. “It’s not just a new technology; it’s a new industrial system,” says Simons. “Companies literally have to change packaging.” It takes months, sometimes years, to figure out how to efficiently get the labels onto products, and companies have balked at adding another step to production lines. Some clients print the codes onto packaging, some have MPedigree print them, and some use stickers. MPedigree tells potential clients it can keep costs within 1 percent of a product’s wholesale value. That limits its own margins.

“If we want to solve counterfeiting but the solution makes prices go up, it will just increase counterfeiting,” says Simons. “That’s stupid.” It looks like the startup is leaving money on the table, but charging more, he says, would reduce the number of clients using the system. There are only four countries—Egypt, Ghana, India, and Nigeria—where enough companies have signed up to make MPedigree’s solution profitable, according to Simons. He won’t give specifics about how much revenue the company has, beyond “in the millions of dollars globally.”

MPedigree could grow faster if regulators push for stronger chain-of-custody rules. In California, an e-pedigree law will soon require drugs sold in the state to come with a record of every step between factory and consumer. In Nigeria, scratch-off codes are now mandatory on all malaria drugs and antibiotics. MPedigree has a number of competitors using similar scratch-off codes or technologies ranging from holograms to radio-frequency identification chips. PharmaSecure, based in Lebanon, N.H., says its labels are on 1.5 billion packs of medicine, mostly in India. Kezzler, based in Oslo, has worked with Pfizer in Hong Kong and Royal Dutch Shell in Kenya. Then there’s Cambridge (Mass.)-based Sproxil, the company co-founded by Ashifi Gogo, MPedigree’s original chief engineer, which has attracted an undisclosed amount of venture capital.

MPedigree is betting that being based in one of the regions worst hit by counterfeit drugs is a competitive advantage. “African entrepreneurs, African startups, African companies, of course are the first and the best to find a solution to local problems,” says San Francisco-based entrepreneur Jorn Lyseggen.

He founded the marketing company Meltwater, which backs the Meltwater Entrepreneurial School of Technology, a startup incubator in Accra that’s invested up to \$200,000 in more than 20 technology companies.

Being in Africa certainly exposes MPedigree to new frontiers of counterfeiting, allowing it to expand beyond medicine. On the other side of Accra’s market district from Drug Lane is a textile store, stuffed with bolts of brightly colored “GTP” cloth, made by a subsidiary of the Dutch luxury fabric company Vlisco. The company says that pirated versions of its products, sold nearby for a fraction of the price, have cut its market share from 50 percent to just 15 percent in the past decade. It adopted MPedigree’s system in March and uses the data to send text-message advertisements to customers.

MPedigree thinks such data can become its most valuable asset, and it plans to turn the millions of text messages it receives into a massive trove of information about African consumers. “Brand owners in the past, especially in Africa and Asia, have had to rely on unreliable and low-quality market research,” says Simons, who plans to offer companies data about their position in the market. “The long-term vision is to be the most trusted repository of information about consumer goods. What would people pay to get access to those analytics?” **B**

## **Officials traced the outbreak to a counterfeit painkiller. Three-quarters of the children who took spoonfuls of syrup from batch O2008 of My Pikin Baby Teething Mixture died**

National Agency for Food and Drug Administration and Control was a breakthrough. “Once Nigeria endorsed it,” says Simons, “a bunch of companies started to take us seriously.”

**Today, MPedigree’s** headquarters is a pastel-colored townhouse in a neighborhood between central Accra and the sprawling suburbs. There’s a diesel-powered generator about the size of an SUV in the driveway. The building looks like an abandoned show home, until you get to what—judging by the built-in wardrobe—was supposed to be the master bedroom. This is where the engineers work, mostly on stuff that doesn’t require reliable access to the Internet: coding, design, strategy. One morning in May, they’re examining text messages. One, presumably from a frustrated counterfeiter, simply reads, “You guys are naughty.” MPedigree’s second-in-command, Selorm Branttie, is looking over call data from the company’s helpline. Users have started asking for basic medical advice.

Occasionally, people call about a product that’s not even supposed to be on the market. One drug distributor didn’t know that its warehouse manager was selling batches of a new malaria treatment until MPedigree started getting calls and texts. “That is one of the biggest problems with local [drug companies]—they have very little control over their own supply chains,”



# NATURE CLEANS OUR AIR



Did you know that trees absorb

1/5

of carbon emissions?

Sixty years ago, The Nature Conservancy's first act was conserving a forest in New York. Today, we help people all over the world to protect the life-giving services their forests provide.

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Protecting nature. Preserving life.®

TIME TO  
OIL UP

AIRBNB FOR BIZ TRAVEL

AMEX  
THE MOVIE

NOT-TRASHY TRASH  
CANS

# ELLE



After having  
a huge hit in 2014,  
Iggy Azalea had  
to cancel her tour and  
barely has a career.  
How winning the  
warm-weather charts  
can ruin a musician  
By Devin Leonard

Burned  
by the Song of  
Summer

Illustration by Justin Metz



y now, you've undoubtedly heard of rapper Iggy Azalea, the 25-year-old Australian blonde with the face of a model and a disproportionate derrière that she shakes proudly in music videos and jokes she can't squeeze into a normal-size dress. But the real reason

you know Azalea is that her song *Fancy*—with its brilliantly inane chorus, “I’m so fancy/You already know/I’m in the fast lane/From L.A. to Tokyo”—was America’s No. 1 hit for seven weeks last year. It outperformed John Legend’s *All of Me* and Pharrell Williams’s *Happy*, ultimately becoming the Song of Summer for 2014.

Summer has long been a brisk season for the music business, and it has often featured an unofficial anthem, but the Song of Summer is a recent phenomenon. Five years ago, *Billboard* turned the coronation of a single hit into an event when it created its Songs of Summer chart, tracking releases from Memorial Day to Labor Day. The magazine also pored over its historical data and found the most popular jams of the previous 25 summers, from Tears for Fears’ *Shout* in 1985 to Rihanna’s *Umbrella* in 2007 and Katy Perry’s *I Kissed a Girl* in 2008.

Now prognosticators from NPR to the least trafficked music blogs studiously parse each year’s contenders. In May the streaming service Pandora released a list of a dozen leaders. “A single song can capture the vibe of the summer and leave an impression for years to come,” Pandora declared on its in-house blog. In late June, Spotify created a midsummer list, based on users’

plays and the “feel-good” nature of the picks. “It’s become the March Madness of music,” says Maura Johnston, a founding editor of the music site Idolator.

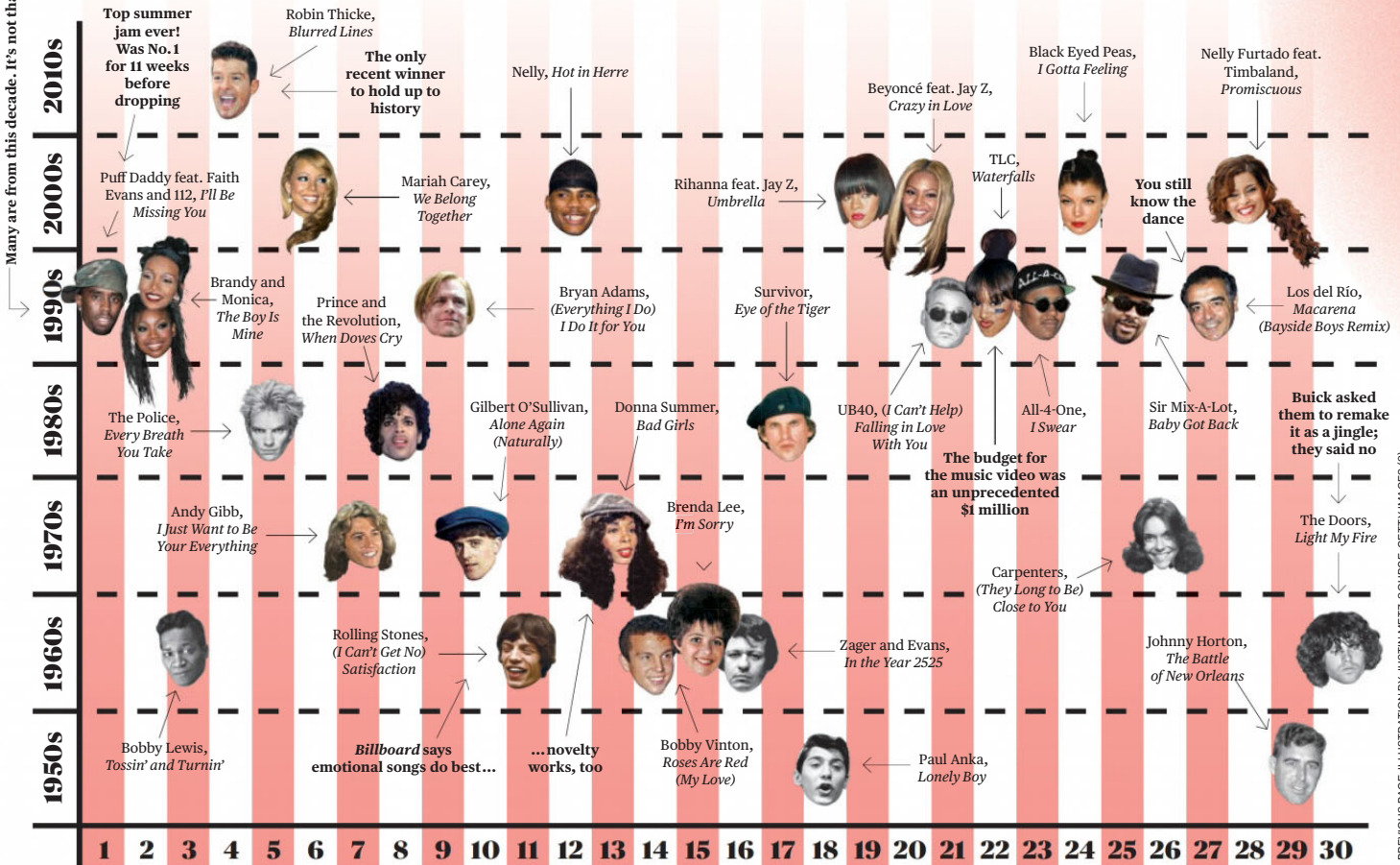
Yet recent history suggests that having the Song of Summer is more of a curse than a blessing. This decade’s winners, such as Carly Rae Jepsen (*Call Me Maybe*, 2012) and LMFAO (*Party Rock Anthem*, 2011), might be generously referred to as two-hit wonders. Azalea’s now fighting against the same fate. Since her success, she’s been accused of being a fraud, a racist who misappropriates black culture, and a homophobe. Every one of her subsequent releases has underperformed *Fancy*. Recently she had to postpone, then cancel, an elaborately conceived arena tour.

Azalea, who declined to comment, brought some of these tribulations on herself. She said things she shouldn’t have, often long ago on social media. And she didn’t have the good sense to apologize when some of them publicly resurfaced. But having the Song of Summer had something to do with it, too, because it makes an artist quickly famous in a way she may not be ready for.

The casual listener might think Azalea materialized out of nowhere last year, but that’s not really true. Born Amethyst Amelia Kelly, she grew up in Mullumbimby, on Australia’s Gold Coast. As a kid, Azalea idolized black American rappers like Tupac Shakur. “White chick on that Pac s---,” she has rhymed. “My passion was ironic, and my dreams were uncommon.” She came to the U.S. when she was 16, spending time in Houston, Miami, and Atlanta, trying to make it as a rapper. Nothing happened until she moved to Los Angeles in 2010, at age 20, and started haunting the offices of Universal Music Group. “She would hang out in my office and pick my brain,” says Chris Anokute, a talent

## The Hottest Hits

Long before the Song of Summer became an Internet obsession, pop music was more popular in warm months. Below, the 30 biggest tunes of our time.





scout at the company's Def Jam Recordings imprint. He wanted to sign her but couldn't persuade his bosses.

Azalea became an underground curiosity in 2011 when she recorded a mixtape, *Ignorant Art*, and released it on the Internet. "If the white women of the world can possibly produce one superstar rapper, Iggy Azalea could be it," the critic Touré wrote in the *New York Times*. Others objected to Azalea's borrowing of African American culture in the same way they had with Eminem and, more recently, Macklemore. Her most insistent critic was Azealia Banks, a black female rapper of roughly the same age and sensibility, who dubbed her "Igloo Australia."

Still without a record deal, Azalea kept her career alive by putting out mixtapes and playing college campuses. In 2012 she took a meeting with Sarah Stennett, chief executive officer of Turn First Artists, a London management company whose clients include other young female artists such as Rita Ora and Ellie

*"It's not  
enough to say  
this song is  
really good.  
That doesn't get  
enough traffic"*

Goulding. Stennett persuaded Azalea to come with her to Wales to work with the Invisible Men, a team of producers known for crafting radio hits. In the studio where Queen conjured *Bohemian Rhapsody* in 1975, they recorded tracks that had a softer aesthetic and more Top 40 potential.

When Anokute heard the results, he says he "e-mailed every top executive at Island Def Jam and said, 'She's a star! We have to sign her!'" Def Jam unveiled Azalea's first album, *The New Classic*, in April 2014. Its biggest song, *Fancy*, featured the rising British singer Charli XCX and hit No. 1 on the *Billboard* Hot 100 on June 7. "It's all timing," says Gary Trust, *Billboard's* co-director of charts. "It was basically No. 1 for June and most of July."

While Azalea was adjusting to her fame, she might have considered what happened to Robin Thicke, the Canadian American R&B singer whose *Blurred Lines* was 2013's Song of Summer. Almost as soon as he peaked, people went after him. The *Daily Beast* called the song's chorus—"I know you want it"—kind of "rapey." Thicke seemed intent on providing more evidence of his sleaziness, miming a canine sex act with Miley Cyrus at the MTV Video Music Awards. Idolator's Johnston argues that Thicke's tar-and-feathering exemplifies the habit of online music writers to take down artists, especially Song of Summer winners. "It's not enough to say this song is really good," she says. "That doesn't get enough traffic." In November 2013 the family of the late Marvin Gaye

accused Thicke and Pharrell, his co-writer on *Blurred Lines*, of plagiarism. (Eventually, a Los Angeles jury sided with the family.) In July 2014, when Thicke released *Paula*, an album dedicated to his estranged wife, it flopped.

Azalea's trajectory has been eerily similar. As *Fancy* crested, bloggers and other rappers questioned her authenticity with renewed vigor. They had ammunition: Some tweets had reappeared in which Azalea insulted blacks, Hispanics, Asians, and gays. The narrative shifted. Azalea wasn't just ripping off black artists; she was possibly a bigot. That would have been a good time for a mea culpa. Instead, Azalea made an awkward plea for sympathy. "They don't say that stuff about Macklemore," she told *Vanity Fair*. "It has 100,000 percent to do with the fact that I have a vagina." Her critics pointed out that people did question Macklemore's credibility. "Iggy Azalea: Dumb or Evil?" asked the feminist website *Jezebel*.

Anokute, who's no longer at Def Jam, is appalled by Azalea's vilification. "She is not misappropriating black culture," he says. "She is a white Australian rapper. She has a right to rap if she wants to. She has a right to be a voice in the culture." Still, the online attacks torpedoed Azalea's sales. Her subsequent single, *Black Widow*, reached No. 3, but none of her other songs cracked the Top 10. "She's said some things that probably riled some people," says *Billboard's* Trust. "It didn't help. That much is clear."

Last December, Azalea announced her Great Escape arena tour, which would kick off four months later. The tour was to be masterminded by Jamie King, designer of Madonna's elaborate 2006 Confessions Tour, which grossed \$194 million, making it one of the most successful ever by a female artist. But a month before it was scheduled to start, Azalea moved it to fall. Then, in May, she canceled it altogether, saying she wanted to rethink her music and imagery. Others suspected she wasn't able to fill the stadiums. "Someone can have a really big hit on the radio, but no one wants to see them live," says Gary Bongiovanni, editor-in-chief of *Pollstar* magazine, which covers the concert business.

There was one performance Azalea didn't cancel. In May the Delta Foundation, a Pittsburgh LGBT group, announced it had booked her to headline its pride event on June 13. That plan exploded when local activists organized a protest saying that hiring the singer was insensitive to queer and transgender people of color. The boycott became a citywide cause. "If you combine the cluelessness of Iggy Azalea with the cluelessness of the Delta Foundation, it was the catalyst for a major public backlash," says Bruce Kraus, president of the Pittsburgh City Council. On June 8, Azalea canceled her appearance and issued an uncharacteristically subdued apology. "I don't know if we had a reaction one way or another," says Gary van Horn, president of the Delta Foundation.

Back in L.A., Azalea's now trying to salvage her career. She's reportedly in the studio working on a second album. "All she has to do is have another hit, and everybody will be back on board," says Brian Scully, a publicist who worked with her in her pre-*Fancy* days. That may be tough. Azalea and Britney Spears recently released *Pretty Girls*, a "girl power" song like *Fancy*. It peaked at No. 29 on the *Billboard* Hot 100 and was eclipsed in late June by Wiz Khalifa's *See You Again* and Taylor Swift's *Bad Blood*.

A star like Swift may be better equipped to handle the scrutiny. But even she's not immune to the curse. She recently had to apologize to rapper Nicki Minaj, whom she mistakenly accused on Twitter of taking a swipe at her *Bad Blood* video. It was strange to see Swift stumble, even momentarily. Then again, it's summer. ❸ —With Sarah Grant



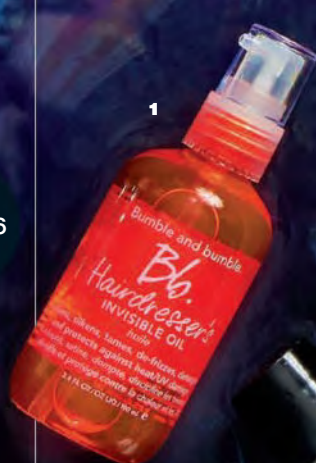


# LOOK SLICK

## Beauty

Inspired by the dewy faces on fashion runways and renewed interest in natural remedies, sales of oil-based products are up 22 percent this year, to \$58.5 million. Here's the best pick for any purpose

66



This one's a given for dudes, though all the others are guy-friendly, too

### 1. Hair

Apply Bumble & Bumble's hairdresser's invisible oil to damp hair to reduce frizz and flyaways. A half-pump is enough—more will make your locks a bit stringy. \$39

### 6. Fragrance

Notes of tuberose, jasmine, and iris in Diptyque's De Son perfume oil roll-on give off a floral musk. Keep in your purse; it won't spill. \$55



### 2. Beard

This lifts and softens stubble to make shaving easier. Spinster Sisters preshave oil includes avocado to treat dry skin and olive oil to soothe sunburns. \$18

### 7. Body

A dry oil, which means it hardens to a film after exposure to air. That makes Carita fluide de beauté 14 a good all-over option. The spritz is intense, though, and so is the scent. \$69



### 3. Face

Drunk Elephant virgin marula oil—made from an African tree fruit—is thought to have anti-aging benefits. Your morning regime will feel like a spa treatment. \$72

### 8. Lips

The Yves Saint Laurent Volupté tint-in-oil hydrates, plumps, and fills in lines while washing your pout in one of eight semi-opaque shades. For summer, try the kicky orange. \$32



### 4. Makeup Remover

There's moisturizing shea butter in L'Occitane's cleansing oil. When you add water, it turns magically milky. \$22



### 9. Sunscreen

Cream sunblock is annoying to apply; aerosols are bad for the earth. Vita Liberata's dry oil SPF 50 is an ideal go-between. But put it on outside, or the whole room will get wet. \$45



### 5. Nails

Got brittle tips or peeling cuticles? Stash Vapour Organic Beauty nail and cuticle oil in your desk drawer, then brush lightly over each finger. \$34

### 10. Bath

Part of the Aveda stress-fix line, it's got lavender and sage from the French Alps—two aromatherapies thought to improve mood. This is strong, so use no more than a shake or two. \$30



After you're clean, try a few drops as a massage oil or body moisturizer

For those with sensitive skin, oil-based scents are less irritating than standard alcohol ones

### What if I have oily skin?

Even better! Products like these quench your skin, so it won't overproduce its own natural moisture. It may take a week for your complexion to adjust.





## THE OSCAR GOES TO... AMEX?

*How corporations became the benefactors of documentary film. By Joel Stein*

**C**elebrating the American small-business owner has heretofore been the job of two groups: Republican politicians and small-business owners. American Express has now joined them, choosing as its gift not extra membership rewards points or cash back, but documentaries.

Its three 20-minute films, made by successful directors, are heartwarming stories about downtrodden entrepreneurs that make the viewer want to spend money at mom-and-pops. Released on Vimeo, YouTube, and on-demand on cable, they were funded by Amex, which brought the idea to Tribeca Digital Studios, the year-old filmmaking arm of the Tribeca Film Festival. Last year, Tribeca released its first documentary—*We Could Be King*, about an inner-city high football team—and it won an Emmy. No one cared it was sponsored by Dick's Sporting Goods.

Since BMW hired Guy Ritchie, Ang Lee, and others to make films in 2001, short movies have emerged as a subtle way of transforming a regular brand into

a lifestyle brand. In 2010, Absolut made one with Spike Jonze. Last year, Chipotle had success with a viral cartoon about industrial farming. Ford underwrote *This Built America*, a documentary series about small-town companies.

Amex has become a leader in this form of patronage. Last year, it hired Davis Guggenheim (*An Inconvenient Truth*) to direct *Spent: Looking for Change*, about the struggles of the underbanked, for whom Amex had new programs. Then it made a series of very short films about a kombucha purveyor. All feature sponsorship messages in the credits but no traditional product placement; you won't see any green plastic or hear mention of Amex.

One of the new films' directors, Heidi Ewing, says she and her partner, Rachel Grady (*Jesus Camp*), get a call every day from a company wanting to make branded content. "You have to make decisions as a filmmaker about how you're going to negotiate this new genre,"

Ewing says. "It's not a commercial, and it's not an independent doc."

With Tribeca as an intermediary, the directors weren't worried about a corporation ruining their work—or reputation. Amex approached Paula Weinstein, executive vice president of Tribeca Enterprises, who reached out to 10 filmmakers. Eight, excited by the idea of making a film without having to secure funding, had ideas; Amex chose three.

The best of them, *Buffalo Returns* by Gini Reticker (*Pray the Devil Back to Hell*), follows two entrepreneurs on the isolated Pine Ridge Reservation in South Dakota. They believe the Lakotas' fate is tied to their buffaloes, and now the buffalo population is reviving, so it's time to sell buffalo-and-cranberry Tanka energy bars. It's a great look at reservation life and tense to watch when they double down with a \$1 million loan during the recession. Then the company is saved—spoiler alert—by the hero of every classic movie: social media.

The others are more cheerleader-y. In *The Downtown Project*, Morgan Spurlock (*Super Size Me*) spends time with Zappos Chief Executive Officer Tony Hsieh, who is working on his nonprofit to fix blighted Las Vegas. The film's star, a recovering addict named Natalie Young who opens a booming diner, is now featured in her own separate Amex commercial. The other, *A Dream Preferred*, is about De'Von Brown, a charming young black man in Baltimore who is trying to start an ice cream business. Watching his Kickstarter page try to earn funding isn't so compelling, though Brown is heartfelt and passionate. As news of the Trayvon Martin shooting percolates in the background, everyone else starts rooting for him, too.

Ewing and Grady had been looking for an opportunity to profile Brown, whom they met shooting another movie. And they were pleased the Amex business folks didn't pretend they were film producers, or even insist the subjects be cardholders. "I was concerned they'd have an issue with the Trayvon thing, but no," Ewing says.

She wasn't as concerned with looking like a sellout. "You catch flak when a film is presenting itself as indie at Sundance and it becomes clear a brand paid for it," she says. "I give other filmmakers s--- for that." But if a corporation does want her to make a straight-up TV commercial, she's game. "Two, three minutes? Sounds awesome." **E**

**"IT'S NOT A  
COMMERCIAL, AND  
IT'S NOT AN  
INDEPENDENT DOC"**



**Kaktus stool by Enrico Bressan  
for Artecnic**

Smart for a small space, even though it's expensive. If you empty it out and turn it over, the cast aluminum frame can double as a chair. For trash, you'll obviously want a bag. \$362.50; [yliving.com](http://yliving.com)



**In Attesa wastebasket by  
Enzo Mari for Danese Milano**

Made by an Italian design legend, it's sliced at an angle so it leans toward you for easy tossing. You'll no longer need to go crawling under your desk to retrieve detritus. \$69; [allmodern.com](http://allmodern.com)



68

# Beautiful

*Furniture designers turn their eyes to the hum*



**Bin Bin waste paper basket by  
John Brauer for Essey**

As a designer, Brauer is into symbolic functionalism, in which form points to function. You might as well use this one for crumpled paper. Be careful with food or leaking pens, though—it stains easily. \$50; [lumens.com](http://lumens.com)



**Waste basket by  
Gino Colombini for Kartell**

A translucent coating gives it a classic Sixties vibe, making it much more sophisticated than your average plastic receptacle. Available in a half-dozen colors to add pop under your desk. \$69; [designpublic.com](http://designpublic.com)



### Gold waste can by CB2

A gleaming riff on Oscar the Grouch's hangout, made in India from galvanized iron. It's incredibly lightweight, if a bit flimsy, but the handles make it simple to move around.

\$49.95; [cb2.com](http://cb2.com)



### Wire-framed trash bin by Schoolhouse Electric & Supply

It's an update on a once-popular midcentury model that's now out of production and impossible to find. Schoolhouse Electric molds its out of steel at a factory in Portland, Ore.

\$125; [schoolhouseelectric.com](http://schoolhouseelectric.com)



# ul Trash

ble office garbage can. By Monica Khemsurov



### Corner can by Alan Wisniewski for Umbra

Flared at the top so you can fit more inside. An "inner retention ring" holds a plastic bag in place. And the lid reduces office odor, while also hiding your leftover lunch.

\$10; [umbra.com](http://umbra.com)



### Asbury metal wastebasket by Bed Bath & Beyond

Coated metal—like this one's lightweight steel—is the most practical for everyday use. It comes in several seaside-inspired hues that, with the nautical rope handles, give your décor a hint of escapism.

\$9.99; [bedbathandbeyond.com](http://bedbathandbeyond.com)



# GO AHEAD, EXPENSE THE AIRBNB

*The home-sharing economy goes after business-trippers*

By Eric Newcomer

**W**hen Fiona Tang, co-founder of the consulting company Signal Camp, was going to New York for business, she didn't want to stay in a boring Midtown hotel. Her client—a frugal startup that was footing the bill—suggested she check out Airbnb, the online company that rents out single rooms, entire homes, and other residential spaces. Tang settled on a studio in the Boerum Hill neighborhood of Brooklyn, then turned the dining room table into a desk. “It felt less like a business trip and just like I headed into New York and took some meetings,” Tang, 32, says.

After seven years of courting urban vacationers, Airbnb is going after customers like her. Right now, about 10 percent of the company's rentals are from businesses. But there's huge opportunity: U.S. business travel spending, which is expected to total \$302.7 billion in 2015, will climb 5.4 percent next year, according to the Global Business Travel Association. “Corporate travel is worth a lot of money,” says Nathan Blecharczyk, Airbnb's chief technology officer. “We're further along on our leisure side.”

To fix that, the company introduced a rudimentary program called Business Travel on Airbnb a year ago, which offered bulk discounts and tracked nightly rentals. It had received requests for such a service, mostly from other tech companies. Marc McCabe, who runs the group at Airbnb, has since become a familiar name in Silicon Valley human resources departments. At first he'd manually send out cumbersome invoices and Excel spreadsheets to companies breaking down their costs. As the number of partners using Airbnb ballooned to

250—Google, SoundCloud, and Vox Media among them—McCabe's e-mails and one-off coupon codes became too kludgy. “Historically, it's been a supermanual process,” says Mike Lewis, Airbnb's product manager for business travel.

Corporate customers began asking for a smarter system. On July 20 the San Francisco company relaunched Business Travel and kicked off a marketing campaign—“Help your team always feel at home” is the tag line. There's now one central billing interface and a dashboard for HR offices to track the average cost of a room per person, say, or select how employees pay. At the moment, Airbnb

isn't designating some rentals for leisure and others for business, but that could change: Managers might want to prevent staff from staying in certain neighborhoods or types of places.

Twilio, a San Francisco company that makes software development tools, uses Airbnb to put up some new hires for a month when they relocate from a different city. “That gives them enough time to figure out the Bay Area,” says Kelly Cammer, Twilio's travel manager. It also provides recruits with a more authentic experience than a hotel would offer, she says.

But it's harder to imagine a Wall Street analyst or sales executive agreeing to stay in a stranger's apartment. Many road warriors appreciate the pampering and loyalty programs that come with a top hotel. So, for now, Airbnb says it can gain a foothold with extended-stay business travel, or with off-site meetings for which a team wants to stay in a house together, says Chip Conley, the company's head of hospitality and strategy.

Other tech startups are already benefiting from this audience. Major banks and other firms offer Seamless, the meal-ordering service, as a perk for employees who work late. In July, Uber accounted for 55 percent of all rides expensed by employees whose companies use Certify, the second-largest provider of expense software in North America.

Receipts for Airbnb through Certify's system are growing, too, climbing 143 percent from the first quarter of 2015 to the second. Airbnb is also working with another expense manager, Concur Technologies, to integrate their systems more closely. To appeal globally, the company's new business tools will be available in more than two dozen languages.

As it stands, hotels remain the dominant business choice, though they're playing defense. Since 2014 the American Hotel & Lodging Association—which represents 52,000 properties—has been lobbying against Airbnb in various cities. They have reason to be worried. A few weeks ago, Airbnb closed a round of financing at a \$25.5 billion valuation, a person familiar with the matter said. That makes Airbnb more valuable than Marriott or Starwood. Better start using up those points. **B**



## What's the Thrive Network?

It's a 501c3 I founded 20 years ago to serve people with intellectual and developmental disabilities. It's grown into a multimillion-dollar business.

## Wait, it's a business?

There's a misnomer that nonprofits aren't companies. Nonprofits go through every single thing a for-profit does—we just don't have to deliver a profit.

## You're quite well-dressed for a nonprofit office.

I'm also a lawyer. I became an assistant district attorney in Brooklyn.

## Why blue suits?

They're my armor. My first one was an Easter suit at 5 years old for church. How it made me feel then is how it makes me feel now: important, strong, fearless, and confident.

## Are you wearing cuff links?

Yes! They're a good way to add color.

CUTLER & GROSS

CHARLES TYRWHITT

HUGO BOSS

REISS

SUITSUPPLY

BROOKS BROTHERS

TIFFANY

DAVID YURMAN

TUMI

JOHN FLUEVOG

SUITSUPPLY

## Nice glasses.

I have partial blindness in one eye. My original frames were black, but in the past few years, everybody's wearing black frames! These are "warrior blue."

## Do you always wear Charles Tyrwhitt shirts?

They're economically feasible—four for \$200. I wear them 16 to 18 hours a day, and you don't want to spend that much on a shirt that will be stained in a month. These last me 30 to 45 wears each.

## What's your shoe strategy?

I like simple black shoes. They don't take away from an outfit. They enhance it.

## Any fashion advice?

When getting dressed, people need to think, What message am I delivering? There's an intended one and an unintended one.

# CHARLES ARCHER

42, chief executive officer, the Thrive Network, Brooklyn, N.Y.





# LINDA HEASLEY

President and chief executive officer, Lane Bryant

Fourth grade, 1965



"I was a synchronized swimmer when it was definitely the dork sport of all time."

Got her MBA from UCLA in 1986

## Education

Shaker Heights High School, Ohio, class of 1974

Harvard University, class of 1979

## Work Experience

**1979–81**  
Education director, Cancer Control Program, University of New Mexico

**1981–84**  
Tour guide, Caesar Tours

**1986–87**  
Analyst, American Airlines

**1987–90**  
Director of administration, Shank, Irwin, Conant, Lipshy & Casterline

**1990–92**  
Director, Lipshy Stephenson

**1993–2002**  
Vice president for planning, CVS

**2002–03**  
VP for planning and operations, Timberland

**2003–04**  
SVP for planning and allocation, Bath & Body Works

**2004–06**  
SVP for planning and allocation, Limited Brands

**2007–13**  
Chairman, president, and CEO, the Limited

**2013–Present**  
President and CEO, Lane Bryant

## Life Lessons

"We created a tumor registry in skin care that's been used as a model, and taught Navajo medicine men how to look for cancer."

Wedding day, 1984, with grandmothers



"It was a merchant bank doing deals—that really cultivated my love of acquisitions."

"They knocked on my door, and I loved the brand—though I didn't know anything about footwear or product development. The people were amazing, but it felt like a fraternity house all the time."



With Salt-N-Pepa and models at an event in NYC, 2015

"Our 2015 campaign is #ImNoAngel. Don't tell her to lose weight. Tell her to be the best person she can be."



"I perfected the art of the pub crawl, leading historic tours in England."

"This was the first of CVS's great acquisition phases: The company grew from \$4 billion to \$35 billion."

With CVS employees in a store, late 1990s



"They asked me to support all the businesses: Victoria's Secret, Express, the Limited, Bath & Body Works, and Henri Bendel. It was an amazing opportunity, but I kept saying, 'I'd really love to run a brand.' I think they got tired of me saying that."



"For six months, my job was to bring the brand to profitability and ready it to be sold. Sun Capital acquired it, then kept me on as CEO."

Boating in Tybee, Ga., in 2014 with Marcus, her Frenchie





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